

# Colton Crossing Rail to Rail Grade Separation Project

CITY OF COLTON  
SAN BERNARDINO COUNTY, CALIFORNIA

Initial Study with Proposed Mitigated Negative  
Declaration



Prepared by the  
State of California Department of Transportation



February 2011

## General Information about This Document

### What's in this document:

The California Department of Transportation (Department) has prepared this Initial Study (IS), which examines the potential environmental impacts of the alternatives being considered for the proposed project located in San Bernardino, California. The document tells you why the project is being proposed, what alternatives we have considered for the project, how the existing environment could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

### What you should do:

- Please read the document.
- Additional copies of this document, as well as the technical studies, are available for review at the following locations:

Caltrans District 8  
Environmental Studies/Support B  
464 W. 4<sup>th</sup> Street, MS 821  
San Bernardino, California 92401

SANBAG  
1170 W. 3<sup>rd</sup> Street, 2<sup>nd</sup> Floor  
San Bernardino, California 92410

City of Colton  
Public Works Department  
650 N La Cadena Drive  
Colton, California 92324

City of Colton  
Main Library  
656 9<sup>th</sup> Street  
Colton, California 92324

City of Colton  
Luque Branch Library  
294 E. O Street  
Colton, California 92324

- Attend a public hearing.
- We welcome your comments. If you have any comments regarding the proposed project, please attend the public hearing and/or send your written comments to the Department by the deadline.
- Submit comments via postal mail to Caltrans District 8, Environmental Studies/Support B, 464 W. 4<sup>th</sup> Street, San Bernardino, California 92401 Attn: Marie Petry, Office Chief
- Submit comments via email to: [marie\\_petry@dot.ca.gov](mailto:marie_petry@dot.ca.gov)
- Submit comments by the deadline: March 31, 2011

### What happens next:

After comments are received from the public and reviewing agencies, the Department in cooperation with SANBAG will respond to comments, prepare the final environmental document and may: 1) give environmental approval to the proposed project, 2) undertake additional environmental studies, or 3) abandon the project. If the project is given environmental approval and funding is appropriated, part, or all, of the project can be designed and constructed.

For individuals with sensory disabilities, this document can be made available in Braille, large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Marie J. Petry, Office Chief, Environmental Studies/Support B, 464 W. 4<sup>th</sup> Street, San Bernardino, California 92401 MS 821 (909) 383-2841.

Colton Crossing Rail to Rail Grade Separation Project in the City of Colton, San Bernardino County, California

**INITIAL STUDY with Proposed Mitigated Negative Declaration**

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA  
Department of Transportation

2/24/2011  
Date of Approval

  
\_\_\_\_\_  
DAVID BRICKER  
Deputy District Director  
District 8 Division of Environmental Planning  
California Department of Transportation

# PROPOSED MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

## ***Project Description***

The California Department of Transportation (the Department) proposes to grade separate two existing railroad mainline tracks that run perpendicular to one another.

## ***Determination***

This proposed Mitigated Negative Declaration (MND) is included to give notice to interested agencies and the public that it is the Department's intent to adopt an MND for this project. This does not mean that the Department's decision regarding the project is final. This MND is subject to modification based on comments received by interested agencies and the public.

The Department has prepared an Initial Study for this project; and pending public review, expects to determine from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no effect on agriculture and forest resources, land use, population and housing, and recreation.

In addition, the proposed project would have no significant effect on air quality, biological resources, paleontological resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, mineral resources, noise, public services, transportation and traffic, and utilities and service systems.

The proposed project would have no significant adverse effect on aesthetics and archaeological resources because the following mitigation measures would reduce potential effects to insignificance:

- AES-2** During final design, the Union Pacific Railroad (UPRR) shall incorporate aesthetic wall treatments into the final design of the proposed project. The selection process for aesthetic wall treatments shall be developed in consultation with the City of Colton and City-designated stakeholders. The selection of aesthetic wall treatments shall be based on the following criteria:
- Design shall include the application of a variety of textures and patterns to promote visual interest and to deter vandalism. Textures and patterns shall not consist of protruding features or shapes nor shall they include sharp edges; and
  - Design shall include the application of subtle reliefs at caps and/or parapets to enhance shadow lines and to promote visual interest. Relief depth of textures and patterns and at caps and/or parapets shall be restricted to a maximum depth of 2 inches thereby facilitating inspection for cracking and structural deficiencies; and
  - Design for wall treatments on the north side of the structure shall maintain compatibility with the I-10 Corridor Landscape Master Plan; and
  - Design shall not incorporate bold or bright colors that may interfere with day-to-day railroad operations. To the extent feasible, concrete treatments shall be integral-colored or stained to reduce the frequency of maintenance activities; and

- Treatments shall be applied by form liner in basic patterns and repetitions so as to facilitate future maintenance and/or replacement; and
- Design of the treatment and materials used in the treatment shall consider graffiti control and the long-term need to remove graffiti.

**CUL-3** An Environmentally Sensitive Area (ESA) will be established for the following seven archaeological sites: 36-022627, 36-022629, 36-022630, 36-022631, 36-022632, 36-022633, and 36-022634. The ESA will consist of an area within and near the limits of construction where access is prohibited or limited for the preservation of each archaeological site. The ESA boundary of each site includes the surface exposure of the site and potential subsurface deposits identified during the remote sensing program, and a buffer of 20 feet. No work shall be conducted within the ESA. All designated ESAs and fencing limits will be shown on final design plans and appropriate fencing requirements included in the PS&E. Fencing will consist of high visibility fencing material and will be 4 feet high. The archaeological monitor who meets the Secretary of Interior Professional Qualifications Standards for historical archaeology shall monitor the placement of the ESA fencing, inspect the fencing periodically throughout the construction period, order replacement of fencing (if needed) and monitor removal of fencing at the end of construction (see ESA Action Plan in the HPSR, Attachment F).

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DAVID BRICKER  
Deputy District Director  
District 8 Division of Environmental Planning  
California Department of Transportation

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Date

### Colton Crossing Rail to Rail Grade Separation Project

#### 1.1 Introduction and Project Location

The California Department of Transportation (Caltrans or the Department) is the Lead Agency under the California Environmental Quality Act (CEQA). The Department, in cooperation with the San Bernardino Associated Governments (SANBAG), Federal Highway Administration (FHWA) and the Federal Rail Administration (FRA) proposes to grade separate two existing railroad mainline tracks that run perpendicular to one another.

The Union Pacific Railroad (UPRR) tracks, located within the study area, run west to east and south of Interstate 10 (I-10). The project study area for the purpose of this study is from approximately 3,100 feet west of Rancho Avenue to approximately 180 feet east of Mount Vernon Avenue to the east. Encompassing approximately 105 acres, the project study area extends approximately 11,200 feet from east to west and approximately 700 feet, at its widest, from north to south.

In the City of Colton, San Bernardino County, California, two Burlington Northern Santa Fe Railway (BNSF) San Bernardino Subdivision mainline tracks running in a north-south direction cross at-grade perpendicularly to two UPRR Alhambra/Yuma Subdivision mainline tracks running in an east-west direction. The crossing of these sets of tracks is known as the “Colton Crossing.” A substantial portion of freight movements between the Los Angeles area, the Inland Empire, and points east, north, and south must pass through the Colton Crossing. The at-grade nature of the Colton Crossing is an operational constraint that results in delays to the regional rail network where these two heavily traveled rail lines intersect. Figure 1.1 (see Section 1.4) shows the project location and vicinity maps. The proposed project would grade-separate the UPRR tracks from the BNSF tracks to improve the operational efficiency of each rail line.

As detailed in Figure 1.2 (see Section 1.4), there are currently two mainline UPRR tracks that run to the west of the Colton Crossing in the study area. At the western edge of the project study area, the existing mainline UPRR tracks connect to the UPRR Palmdale Cutoff Track through the Palmdale Cutoff Wye. Also in this area, the UPRR Bypass track, which allows trains to bypass the West Colton Yard, extends under the UPRR Palmdale cutoff track.

Just west of the Colton Crossing, the existing mainline UPRR tracks are connected to the mainline BNSF tracks by a Wye Connection Track. This connection track runs underneath the I-10 Freeway Bridge, and becomes the third mainline BNSF track north of I-10. East of the Colton Crossing, a connection track branches from the south off the easternmost BNSF mainline to become a third UPRR mainline through the corridor east of the crossing. This track provides connection to and from the UPRR East Colton Rail Yard and allows connectivity between the BNSF and UPRR lines through the southeast quadrant of the Colton Crossing.

East of the Colton Crossing, a connection track branches from the south off the easternmost BNSF mainline to become a third UPRR mainline through the corridor east of the crossing. This track provides connection to and from the UPRR Old Colton Rail Yard, located south of I-10 west of Mount Vernon Avenue, and allows connectivity between the BNSF and UPRR lines through the southeast quadrant of the Colton Crossing.

## Chapter 1 – PROJECT DESCRIPTION

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The UPRR mainline crosses the BNSF mainline tracks within the project study area. There are two mainline BNSF tracks within the project study area. North of the project study area, from W. Valley Boulevard to approximately Olive Street, there are three mainlines transitioning to six mainlines toward Laurel Street.

In addition to I-10, major vehicular and pedestrian corridors in the project area include Rancho Avenue, La Cadena Drive, Mouth Vernon Avenue, and 9<sup>th</sup> Street, which each provide access between the northern and southern portions of the City. Ninth Street currently terminates northerly of the UPRR tracks. Unauthorized pedestrian movement across the existing mainline to access 9<sup>th</sup> Street, from the south, to reach commercial areas north of I-10 has been observed in the project area.

The majority of the study area is developed or highly disturbed and consists of paved areas, buildings, bare ground, ornamental plantings, rail features, and ruderal vegetation. Topography within the study area is generally flat and gently slopes from west to east, toward the Santa Ana River. Elevations in the project study area range from approximately 1,020 feet above mean sea level (AMSL) in the west to approximately 950 feet AMSL to the east. Vegetation in these areas consists primarily of nonnative species.

There are two drainage channels that traverse the project study area (the the 8th/9th Colton Southwest Storm Drain (SD SYSTEM 3-8/3-9) and 11<sup>th</sup> Street Storm Drain (SD SYSTEM 3-10) System 3-10 is a double 48 inch reinforced concrete pipe (RCP) that crosses the I-10 Freeway at 11th Street and extends below the UPRR hence flowing south into a system that eventually discharges into the Santa Ana River. SYSTEM 3-8 is a 6 foot by 7 foot reinforced concrete box (RCB) that passes under the I-10 freeway at 3rd Street. Flows are conveyed from this system along a swale on the south embankment of the I-10 and intercepted by a 54 inch RCP. Flows continue downstream where it confluences with another 48 inch corrugated metal pipe (CMP), the SD SYSTEM 3-9. This system discharges into the Colton Southwest Storm Drain approximately 950 feet east of 9<sup>th</sup> Street.

System 3-10 is a double 48 inch RCP that crosses the I-10 Freeway at 11th Street and extends below the UPRR. Within the project study area, this drainage is conveyed both underground in a pipe and in an open trapezoidal channel. The drainage channel continues off-site to the south.

Existing structures within the study area include the former Southern Pacific passenger depot (used recently as a business selling building materials but is vacant) and aboveground communication/signal equipment. Features south of the project study area include the Slover Mountain rock quarry, residential and commercial uses, and the Old Colton Yard. The West Colton Yard is located to the east of the project study area. Features north of the project study area include I-10 and the Colton downtown business district.

### 1.2 Project Description

The purpose of the proposed project is to improve operational efficiency in the regional rail network that exists where the BNSF mainlines cross the UPRR mainlines in the City of Colton, the Colton Crossing. The specific project objectives include:

- Improve regional rail mobility and efficiency by eliminating the conflicting train movements at the Colton Crossing.

## Chapter 1 – PROJECT DESCRIPTION

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- Discourage a shift in goods movement from rail to truck because of conflicting train movements that cause delays and inefficiencies in rail traffic through the Colton Crossing.
- Support regional passenger rail service by minimizing delays at the Crossing, thus improving the operation and efficiency of passenger rail.

### 1.2.1 Project Features

The proposed project (also referred to as the UP Flyover Alternative) would raise the east-west UPRR mainline by placing it on an elevated structure from Rancho Avenue on the west to Mount Vernon Avenue on the east. The grade-separated structure would contain two UPRR mainline tracks (the same as exists today) and a maintenance road. The existing southerly mainline track will remain operational providing local access between the West Colton Yard and East Colton Yards, and for local connecting trains between BNSF and UPRR. Trains traveling on the UPRR running track will cross over the BNSF at the same at-grade location as today. However, the number of trains will be much less than under existing conditions. This track will also be used during construction and there will be no need to construct southerly shoofly tracks to detour trains during construction. The existing northerly mainline track will be removed. The design of the proposed Build Alternative is illustrated in Figure 1.3 and Figure 1.3A (see Section 1.4).

**Flyover Structure.** The flyover structure will consist primarily of a cellular concrete retaining structure. Bridge structures will be used to cross over the BNSF/UPRR Connection Track, the BNSF mainline, tracks, and the existing La Cadena Drive undercrossing.

The cellular concrete retaining structure will consist of cellular concrete backfill faced with precast wall panels. Cellular concrete consists of concrete that is combined with a foaming agent that produces a high-strength lightweight concrete fill material. The cellular concrete is mixed on site in a special apparatus and pumped between the precast wall panels, which serve as outer forms and provide a protective outer layer for the cellular backfill upon completion. The lightweight cellular concrete is being utilized to reduce the mass of the flyover structure to limit potential long-term settlement due to unconsolidated subsoils and to enhance seismic performance of the structure. Each lift of cellular concrete has a depth of approximately 4 feet. Therefore, at each end of the flyover structure, conventional cast-in-place retaining walls with backfill will create a tapered transition to existing grade.

The soils directly under the flyover structure will be strengthened utilizing stone columns arranged horizontally in a grid pattern. Stone columns will be constructed by a vibro-replacement method. This method utilizes a vibratory probe inserted into the ground that forces select backfill material into the soil and densifies the existing soil column around the probe. The resultant columns of strengthened, densified soil will increase soil bearing capacity, reduce total and differential settlement, and reduce liquefaction potential.

Bridges over the BNSF/UPRR Connection Track, the BNSF mainline tracks, and the existing La Cadena Dr. undercrossing will consist of conventional steel rolled-beam type spans with ballasted decks. The bridges will be fabricated from weathering steel, which facilitates bridge inspection and does not require painting. The substructure of the bridges will generally consist of 48-inch diameter cast-in-drilled-hole (CIDH) piles with cast-in-place pile caps and abutments. Several spans of the BNSF/UPRR Connection Track bridge will utilize straddle bents, stepped pile caps and modified bridge girder sections to provide the required vertical and horizontal rail clearances

## Chapter 1 – PROJECT DESCRIPTION

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at that location while minimizing the depth of structure, with the goal of minimizing the height and maximum grade on the flyover.

The elevated portion of the tracks would begin just east of South Rancho Avenue and would continue to the east, returning to the existing grade before Mount Vernon Avenue, a distance of approximately 1.5 miles. The maximum grade of the tracks is approximately 1.20 percent. At its highest point, near where the new UPRR tracks will pass over the BNSF tracks, the top of rail will be approximately 40 feet above the existing grade. The structure will have concrete parapet and steel handrails consisting of either a pipe handrail system or on top of the parapet wall, for a total of approximately 4 to 8 feet above the top of rail, depending on the type of handrail. The total structure (wall/support and fence/handrail) at its highest point will be approximately 44 feet above the existing grade. At this height, the proposed overcrossing structure will be approximately 8 feet taller than the highest point of I-10 to the north. On the northerly side of the structure between Rancho Avenue and the BNSF crossing, a vehicle barrier to prevent rail maintenance vehicles from leaving the flyover structure and tight woven fence to reduce train headlight glare from affecting drivers on I-10 will be placed on the structure. Lighting will be placed on the wall next to the I-10 /Rancho Avenue ramps.

### 1.2.2 Drainage and Best Management Practices

The proposed project would require construction of drainage improvements and the development and implementation of Best Management Practices (BMPs) to mitigate the project's effect on local drainage and water quality.

Construction of the proposed project will necessitate the following drainage improvements:

- Removal of the existing open trapezoidal channel located south of and parallel to I-10 from 3<sup>rd</sup> Street to just west of the BNSF mainline. This facility will be replaced with a 54-inch pipe located between the future elevated structure and the I-10 freeway.
- Placement of a new 78-inch pipe within the flyover structure to provide for future implementation of the 3<sup>rd</sup> Street Storm Drain per the County of San Bernardino Master Plan of Drainage.
- Replacement of the double 48 inch CMPs at the mainline tracks associated with the 11<sup>th</sup> Street storm drain with three 72-inch smooth steel and/or corrugated metal pipes and will be extended underneath the flyover structure to the existing earthen channel. The downstream earthen channel will be lined with concrete from the downstream end of the new culverts to the upstream end of the culverts at the existing yard tracks

The following BMPs would be constructed to treat stormwater and detention from the flyover structure:

- Two existing depressions at southwest corner of I-10 and Rancho Avenue; one or both will be used as proposed infiltration/detention basins.
- Proposed infiltration/detention basin and/or structural BMP unit north of flyover structure at 11<sup>th</sup> Street.
- Proposed infiltration/detention basin and/or structural BMP unit north of flyover structure west of Mount Vernon Avenue.

### 1.2.3 Right-of-Way

Construction of the portion of the elevated structure west of the Colton Crossing would require acquisition by UPRR of a strip of right-of-way from the Department consisting of approximately 0.65 acre, as shown in Figure 1.3 (see Section 1.4). In addition to the right-of-way required from the Department, a Caltrans encroachment permit will be required that will allow crews that are constructing the Colton Crossing to enter Caltrans right-of-way. A small portion of the existing 9<sup>th</sup> Street between the railway and the freeway ramps (currently barricaded from vehicle access) will need to be vacated by the City of Colton to accommodate the proposed flyover structure. The majority of the remaining construction activities are located within existing railroad right-of-way.

### 1.2.4 Staging Areas/Construction Access Points

As shown in Figure 1.4 (see Section 1.4), staging areas will be provided throughout the project study area to provide access to work areas, and provide for storage of material. The open areas in each of the four quadrants of the UPRR/BNSF crossing diamond would be used for staging, and may store materials needed for construction of the bridges over the BNSF connector and mainline, and La Cadena Avenue. Additionally, the area south and north of the existing mainline tracks, east of the existing Colton Crossing, within the UPRR right-of-way, would be used for staging.

Access to the project will be at the following locations:

- From Mount Vernon Avenue, north of the railroad overpass;
- From 6<sup>th</sup> Street north of I-10, east of the BNSF mainline (limited materials delivery);
- From 6<sup>th</sup> Street, north of I-10, west of the UPRR/BNSF mainline (limited to light duty trucks);
- From 5<sup>th</sup> Street via East M Street (limited materials delivery);
- From Pepper Avenue, via East Slover Avenue and existing UPRR maintenance roads; and
- From 9<sup>th</sup> Street, southerly to the UPRR right-of-way.

Primary western access to the construction area will be provided from Pepper Street and primary eastern access will be provided via Mount Vernon Avenue. Most of the construction materials and vehicles that will access the site via roadways will enter at one of these two locations. Secondary access points will be provided from Valley Boulevard via 9<sup>th</sup> Street and 6<sup>th</sup> Street, north of the existing mainline tracks, and from 5<sup>th</sup> Street south of the existing mainline tracks. Access via Valley Boulevard will be limited to light-duty trucks on the west side of the BNSF mainline.

Use of these access points will require temporary at-grade crossings of the UPRR and BNSF tracks. The temporary crossings would be located at:

- UPRR mainline, west of Mount Vernon Avenue overpass;
- BNSF mainline between the UPRR crossing diamond and I-10 bridge;
- UPRR/BNSF connector, north of the UPRR crossing diamond, west of the BNSF tracks and south of the I-10 bridge; and
- The UPRR mainline, west of the Rancho Avenue overpass.

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In addition, the access roads would use existing at-grade crossings of UPRR tracks in the Old Colton Yard and on the mainline east of the crossing diamond. During construction, this and the other temporary crossings may be manned by a UPRR flagman who would control the crossing. Rail traffic would have priority; construction traffic would have to wait for the rail traffic to pass.

### 1.2.5 Utilities

Utility relocation or protection in place of utilities will be necessary during construction. Utility impacts include the following:

- Relocation of underground fiber optic cable, owned by MCI/Verizon, from Rancho Avenue to 9<sup>th</sup> Street.
- Raise or replacement of overhead electrical lines, owned by Southern California Edison (SCE), at 3<sup>rd</sup> Street.
- Removal or relocation of power pole, jointly owned by the City and SCE, at 3<sup>rd</sup> Street.
- Raise or reroute of overhead fiber optic cable, owned by Time Warner, Charter Communications, and Sunsys, to provide sufficient clearance at 4<sup>th</sup> Street.
- Relocate pole of the overhead fiber optic cable on timber pole, owned by Time Warner and ComCast, to provide sufficient clearance at 4<sup>th</sup> Street;
- Raising of overhead communication line owned by City at 4<sup>th</sup> Street.
- Relocation or rerouting of underground fiber optic line, owned by Sprint, at the Colton Crossing.
- Raise or reroute of overhead electrical lines and removal/relocation of underground vault, owned by the City, at 9<sup>th</sup> Street.
- Removal and relocation of City-owned storm drain at 9<sup>th</sup> Street.
- Relocation of electrical poles, owned by SCE, at 11<sup>th</sup> Street.
- Removal and replacement of drop manhole for City sewer at 11<sup>th</sup> Street.
- Modify City storm drain culverts and structures at 11<sup>th</sup> Street.

### 1.2.6 Construction Period

The project is scheduled to commence construction in late 2011 and be completed in 2014.

### 1.2.7 Cost

The estimated total project cost for the proposed project is \$202 million. The proposed funding is \$91.3 million from the Trade Corridor Improvement Fund (TCIF), \$33.8 million from the Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grant Program, \$73.2 million provided by UPRR and BNSF, and \$3.7 million of State funds. The TCIF was established as part of the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 (also known as Proposition 1B) approved by California voters in November

## Chapter 1 – PROJECT DESCRIPTION

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2006. The TIGER Grant Program was established as part of the Federal American Recovery and Reinvestment Act of 2009.

### 1.3 Permits and Approvals Needed

Table 1.3.A lists the permits, reviews, and approvals required for project construction.

**Table 1.3.A: Permits and Approvals Needed**

| Permit/Approval  | Agency   | Status   |
|--|--|--|
| Encroachment Permit  | Caltrans                                       | Coordination will occur after environmental document approval  |
| NPDES Construction General Permit                                | State Water Resources Control Board            | Application will be submitted prior to construction.   |
| Water Quality Management Plan                                    | City of Colton/County of San Bernardino        | Approval will be obtained after environmental document approval.                                     |
| Section 404 Nationwide Permit                                    | U.S. Army Corps of Engineers                   | Permits will be obtained after environmental document approval.                                      |
| Streambed Alteration Agreement (Fish and Game Code Section 1602) | California Department of Fish and Game         | Permits will be obtained after environmental document approval.                                      |
| Water Quality Certification (Section 401 of the Clean Water Act) | Santa Ana Regional Water Quality Control Board | Permits will be obtained after environmental document approval.                                      |
| Local Street Vacation  | City of Colton                                 | Vacation of 9 <sup>th</sup> Street between the UPRR rail line and the freeway ramps.                 |
| Asbestos Notification for structural demolition                  | South Coast AQMD                               | To be filed not less than 10 working days before starting demolition or structural modification work |

### 1.4 Project Maps

The following figures are provided in this section.

- Figure 1.1: Project Location.
- Figure 1.2: Project Study Area.
- Figure 1.3: Build Alternative (UP Flyover).
- Figure 1.3A: Typical Structural Cross Section of the Build Alternative.
- Figure 1.4: Construction Staging and Access Points.

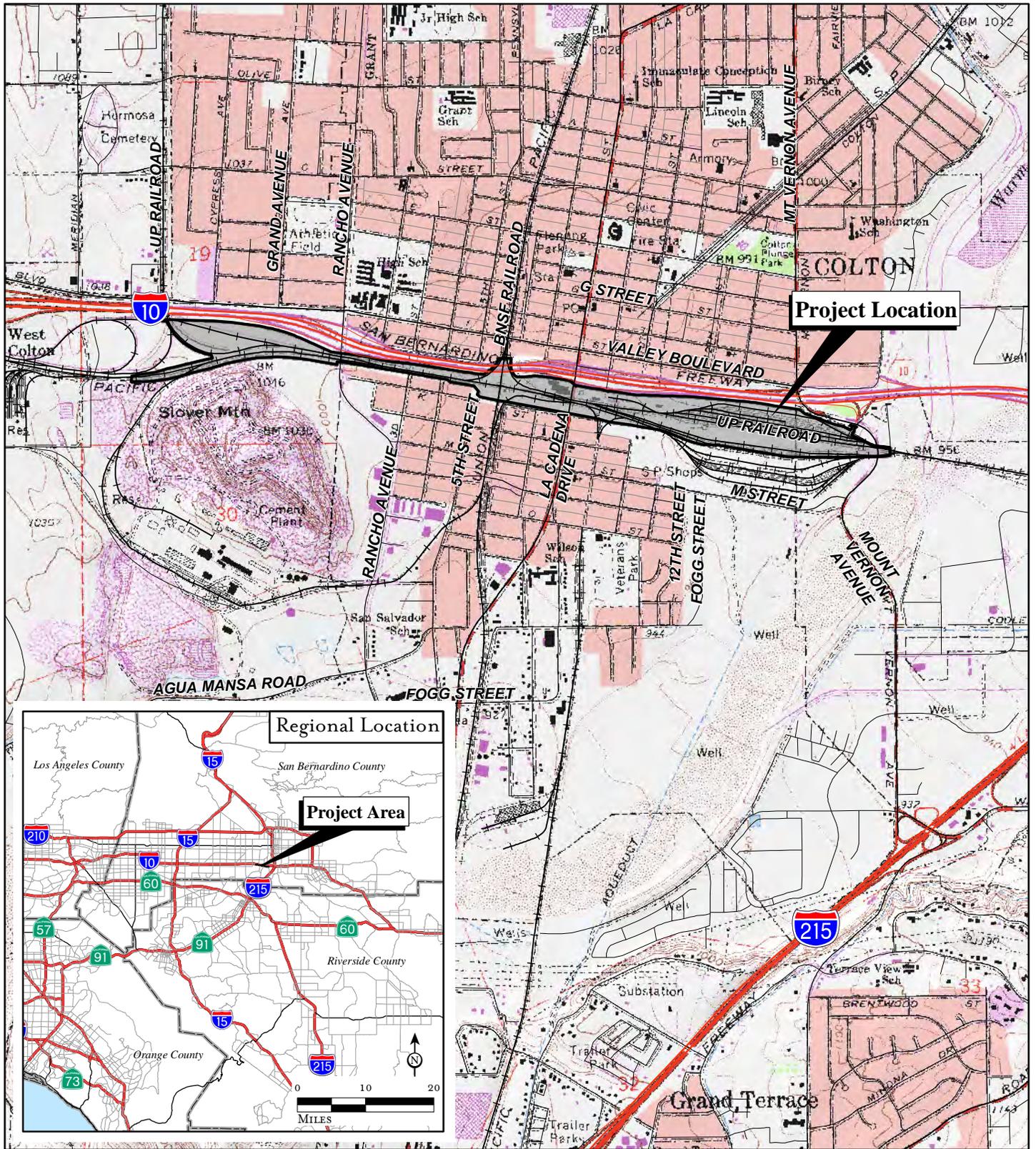
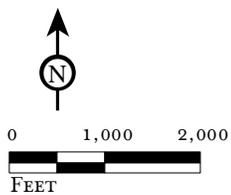


FIGURE 1.1



Colton Crossing Rail-to-Rail  
Grade Separation Project  
Initial Study

Regional and Project Location

SOURCE: USGS 7.5' Quad: San Bernardino South, 1980, CA; Thomas Bros., 2009.

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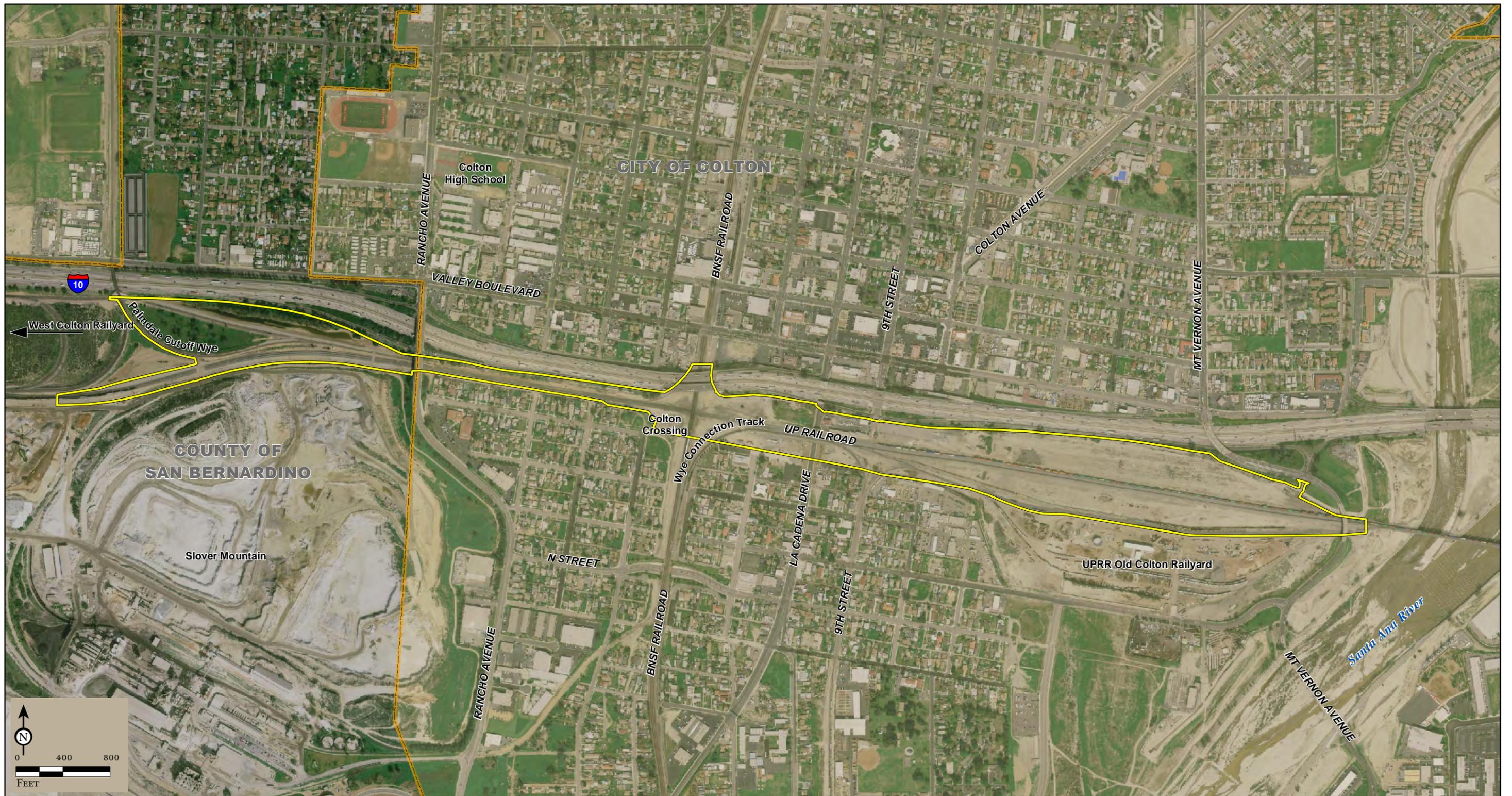
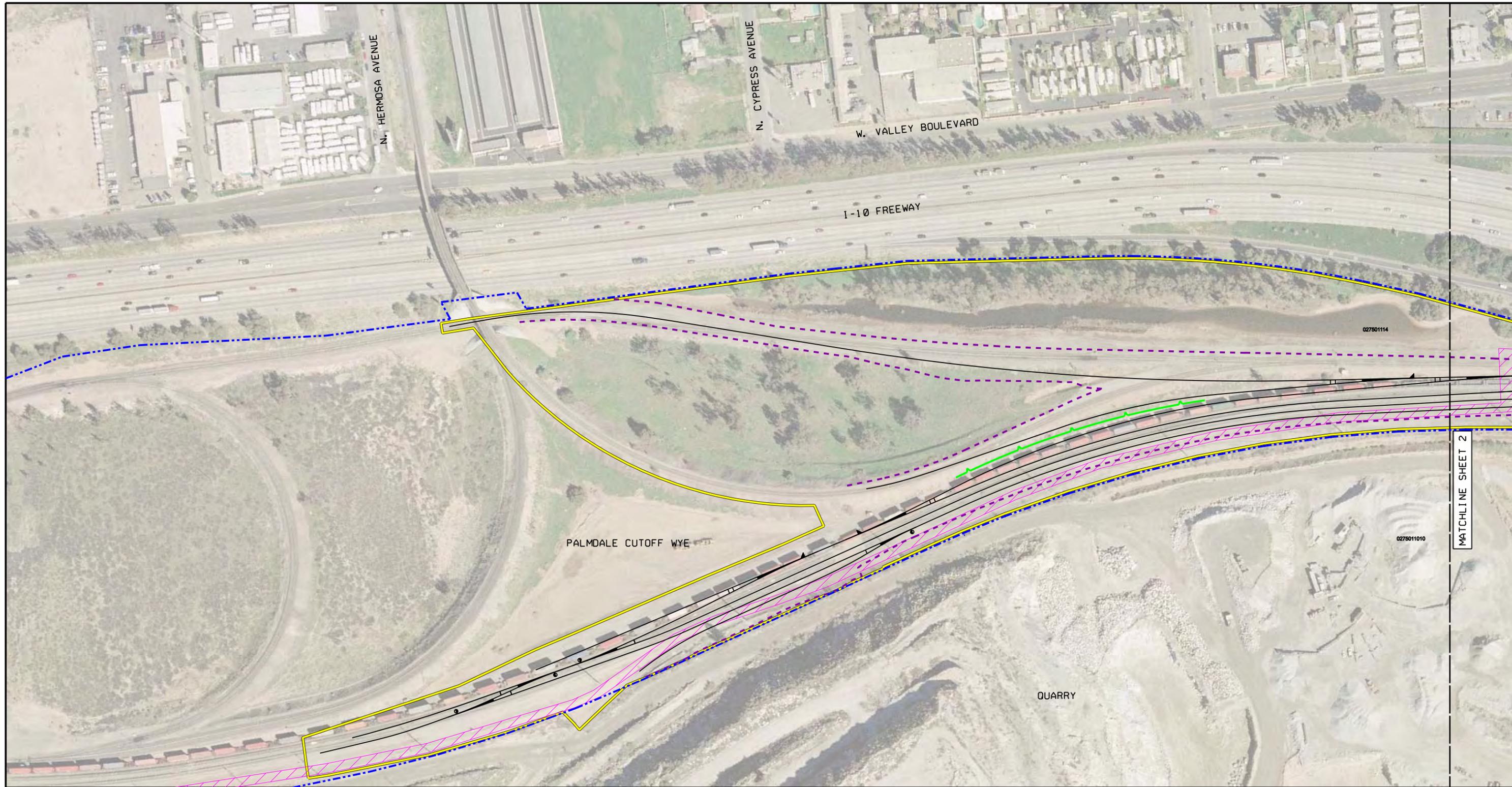


FIGURE 1.2

- Project Boundary
- City of Colton

*Colton Crossing Rail-to-Rail  
Grade Separation Project  
Initial Study*

**Project Study Area**



- PROJECT BOUNDARY
- EXISTING RAILROAD ROW
- POTENTIAL STAGING AREA
- EXISTING STORM DRAIN
- ACCESS ROAD
- PROPOSED RETAINING WALL
- TEMPORARY CONSTRUCTION AREA ON CALTRANS ROW
- PROPOSED BRIDGE STRUCTURE
- HIDDEN BRIDGE STRUCTURE
- PROPOSED TRACKS
- GRADING LIMITS
- BMP IMPROVEMENTS
- MATCHLINE



0 100 200  
SCALE: 1" = 200'

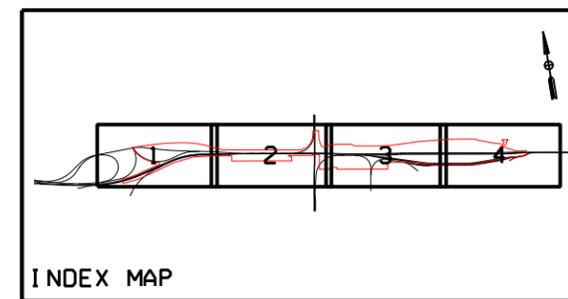
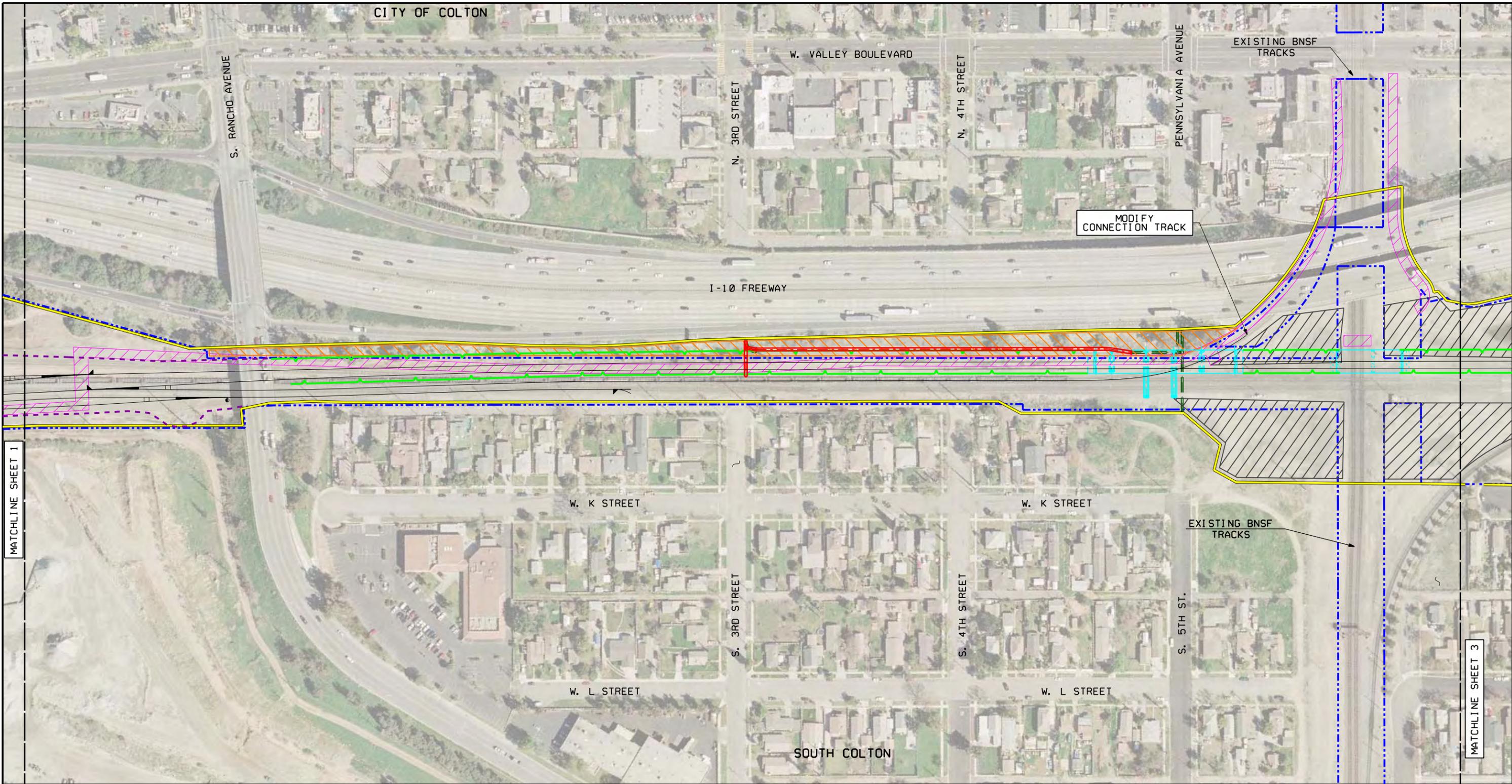


FIGURE 1.3  
SHEET 1 OF 4

BUILD ALTERNATIVE  
(UPRR FLYOVER)

COLTON CROSSING RAIL-TO-RAIL  
GRADE SEPARATION PROJECT  
000001 434

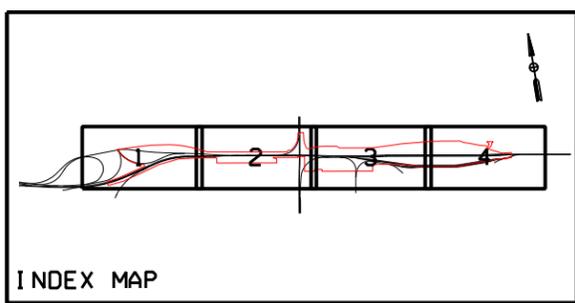
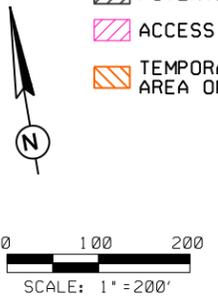
MATCHLINE SHEET 2



MATCHLINE SHEET 1

MATCHLINE SHEET 3

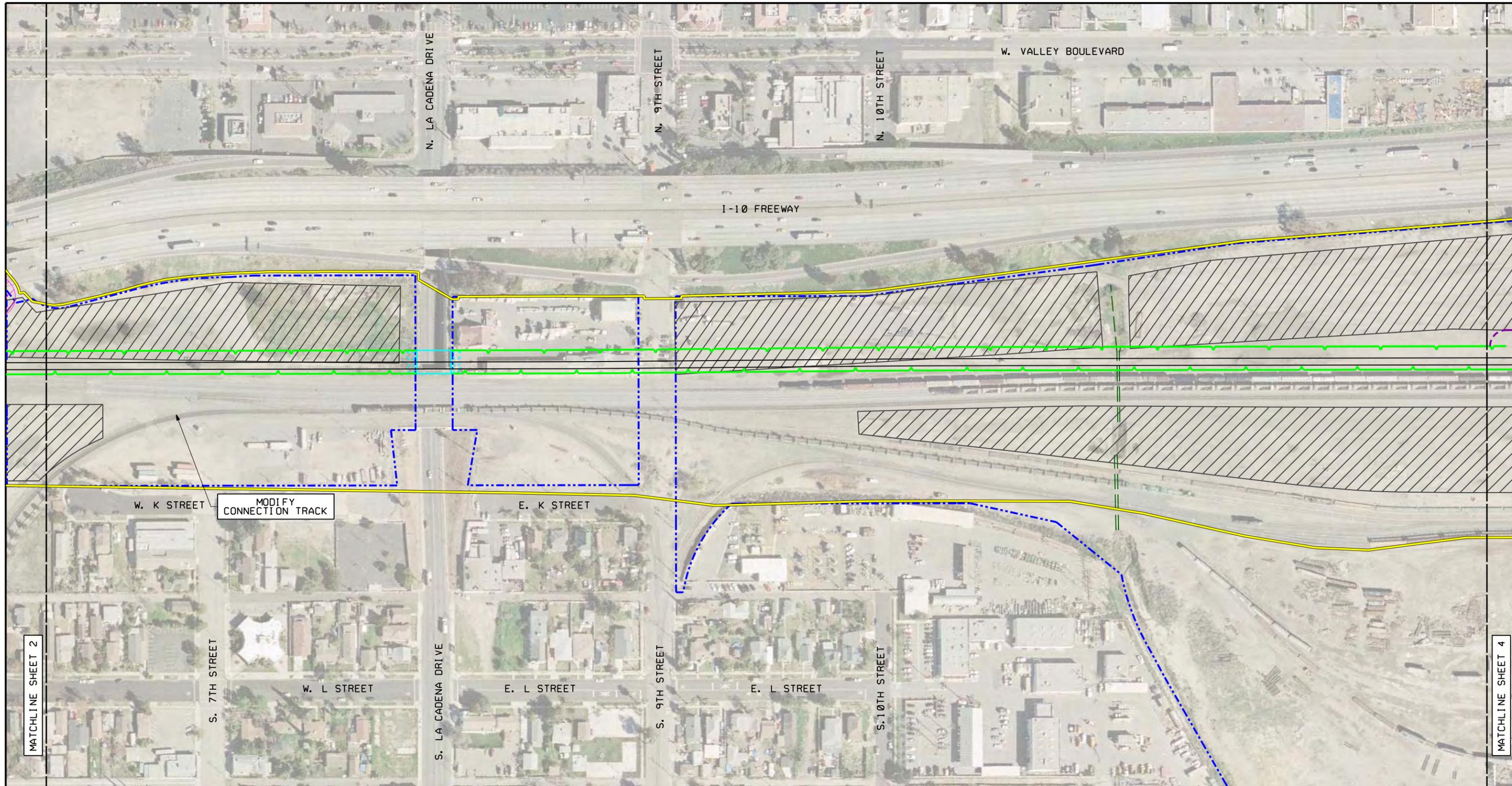
- PROJECT BOUNDARY
- EXISTING RAILROAD ROW
- EXISTING STORM DRAIN
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- PROPOSED RETAINING WALL
- PROPOSED BRIDGE STRUCTURE
- HIDDEN BRIDGE STRUCTURE
- PROPOSED TRACKS
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- BMP IMPROVEMENTS
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**FIGURE 1.3**  
SHEET 2 OF 4

**BUILD ALTERNATIVE**  
(UPRR FLYOVER)

COLTON CROSSING RAIL-TO-RAIL  
GRADE SEPARATION PROJECT  
000001 434



- PROJECT BOUNDARY
- EXISTING RAILROAD ROW
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- BMP IMPROVEMENTS
- MATCHLINE

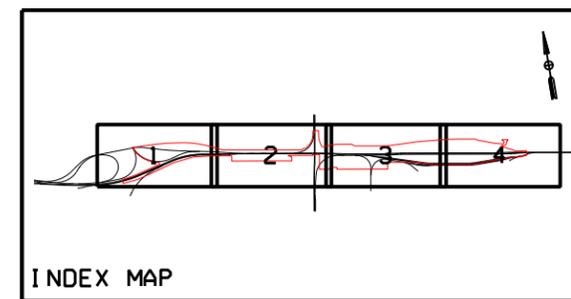
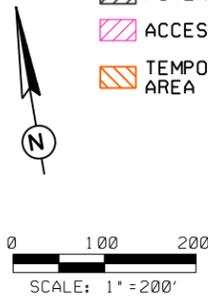
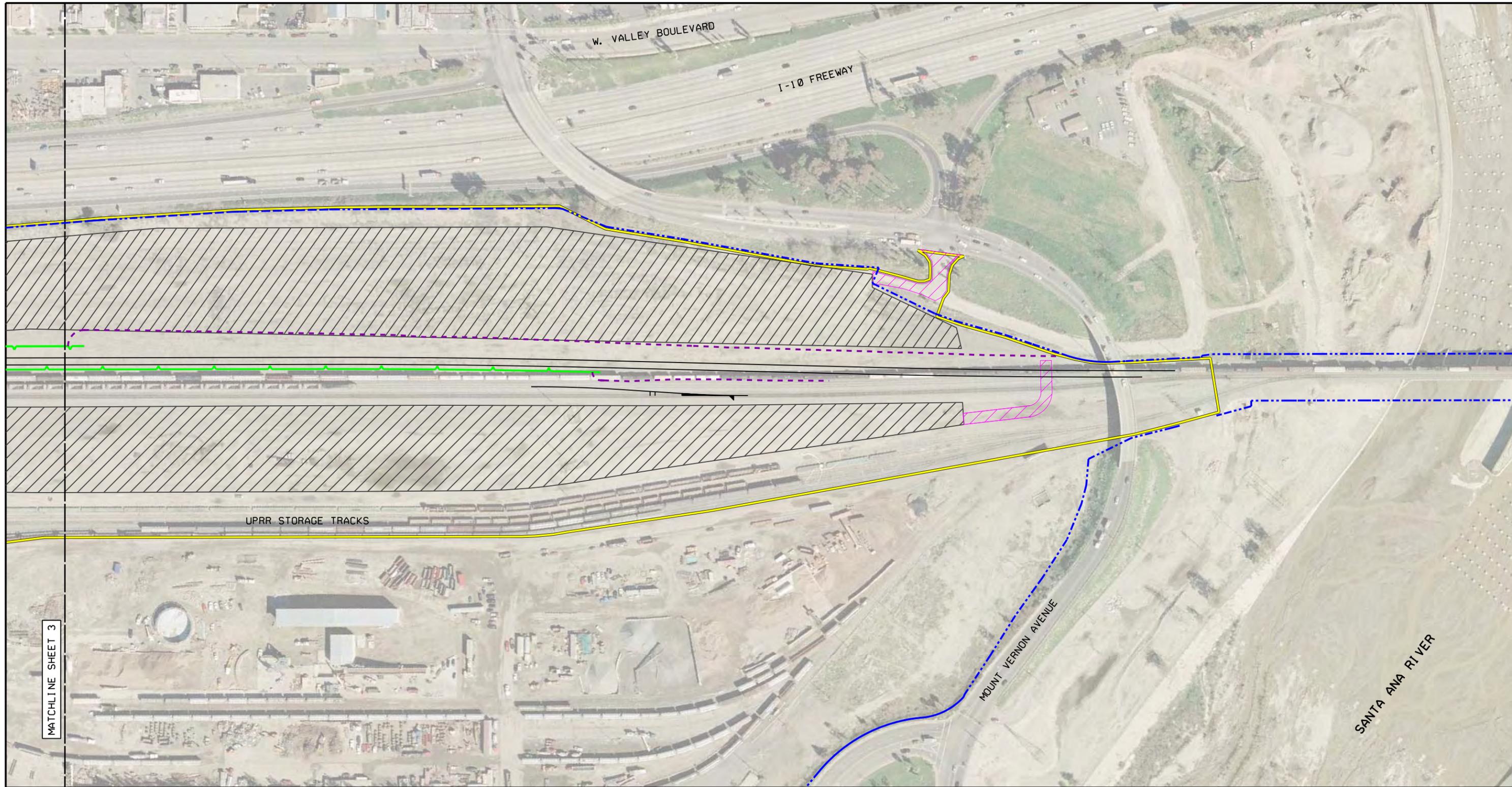


FIGURE 1.3  
SHEET 3 OF 4

BUILD ALTERNATIVE  
(UPRR FLYOVER)

COLTON CROSSING RAIL-TO-RAIL  
GRADE SEPARATION PROJECT  
000001 434



- PROJECT BOUNDARY
- POTENTIAL STAGING AREA
- ACCESS ROAD
- TEMPORARY CONSTRUCTION AREA ON CALTRANS ROW
- EXISTING RAILROAD ROW
- EXISTING STORM DRAIN
- PROPOSED RETAINING WALL
- PROPOSED BRIDGE STRUCTURE
- HIDDEN BRIDGE STRUCTURE
- PROPOSED TRACKS
- GRADING LIMITS
- BMP IMPROVEMENTS
- MATCHLINE

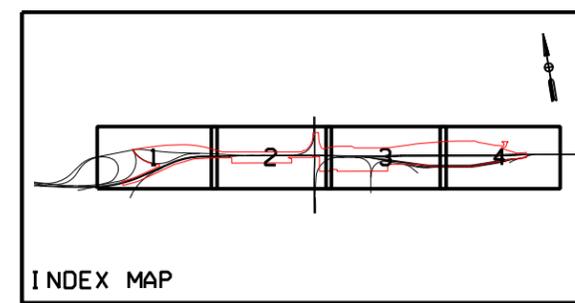
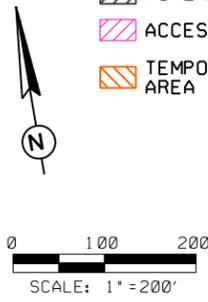


FIGURE 1.3  
SHEET 4 OF 4

BUILD ALTERNATIVE  
(UPRR FLYOVER)

COLTON CROSSING RAIL-TO-RAIL  
GRADE SEPARATION PROJECT  
000001 434

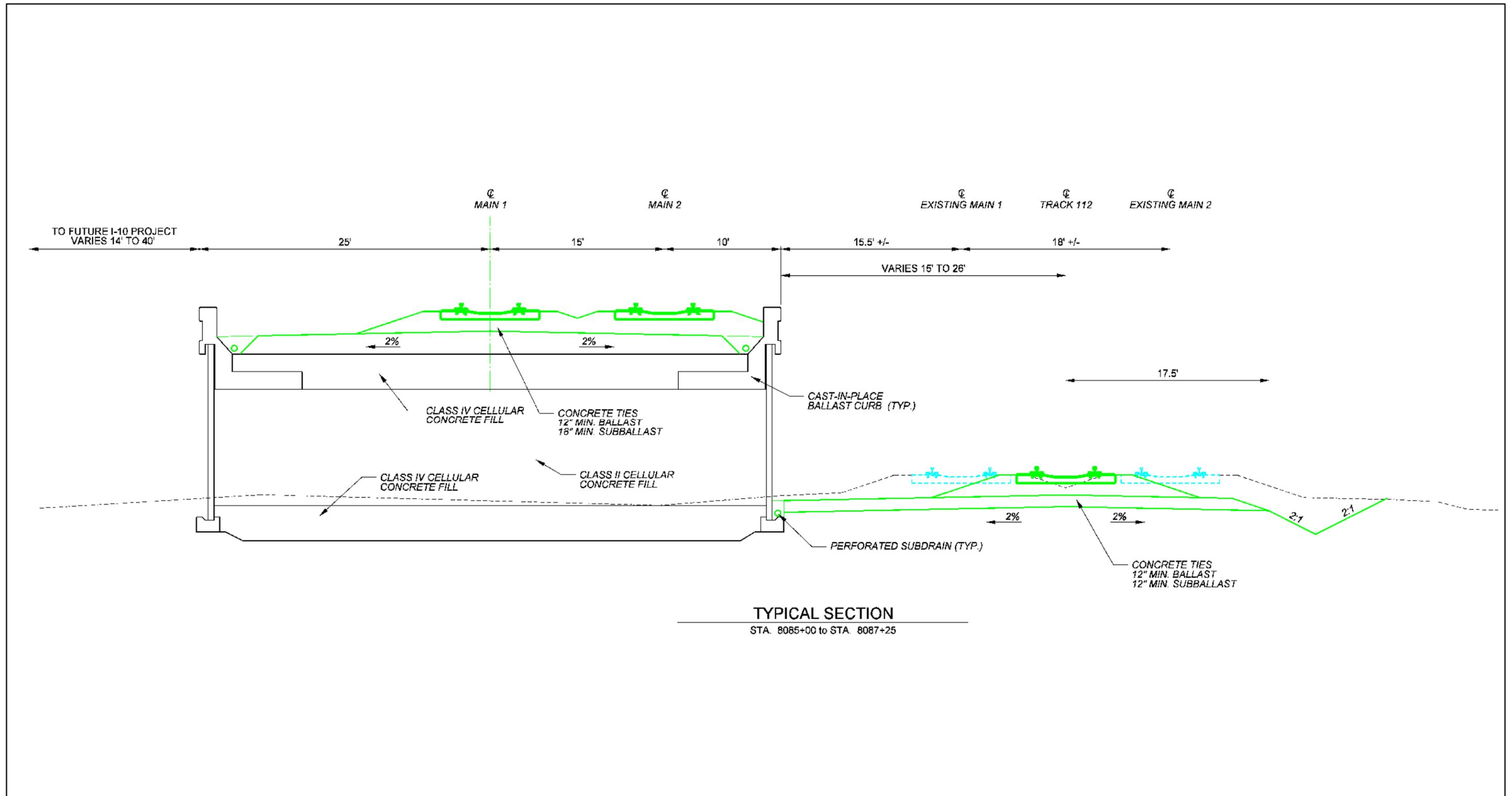


FIGURE 1.3A

Colton Crossing Rail-to-Rail  
Grade Separation Project  
Initial Study

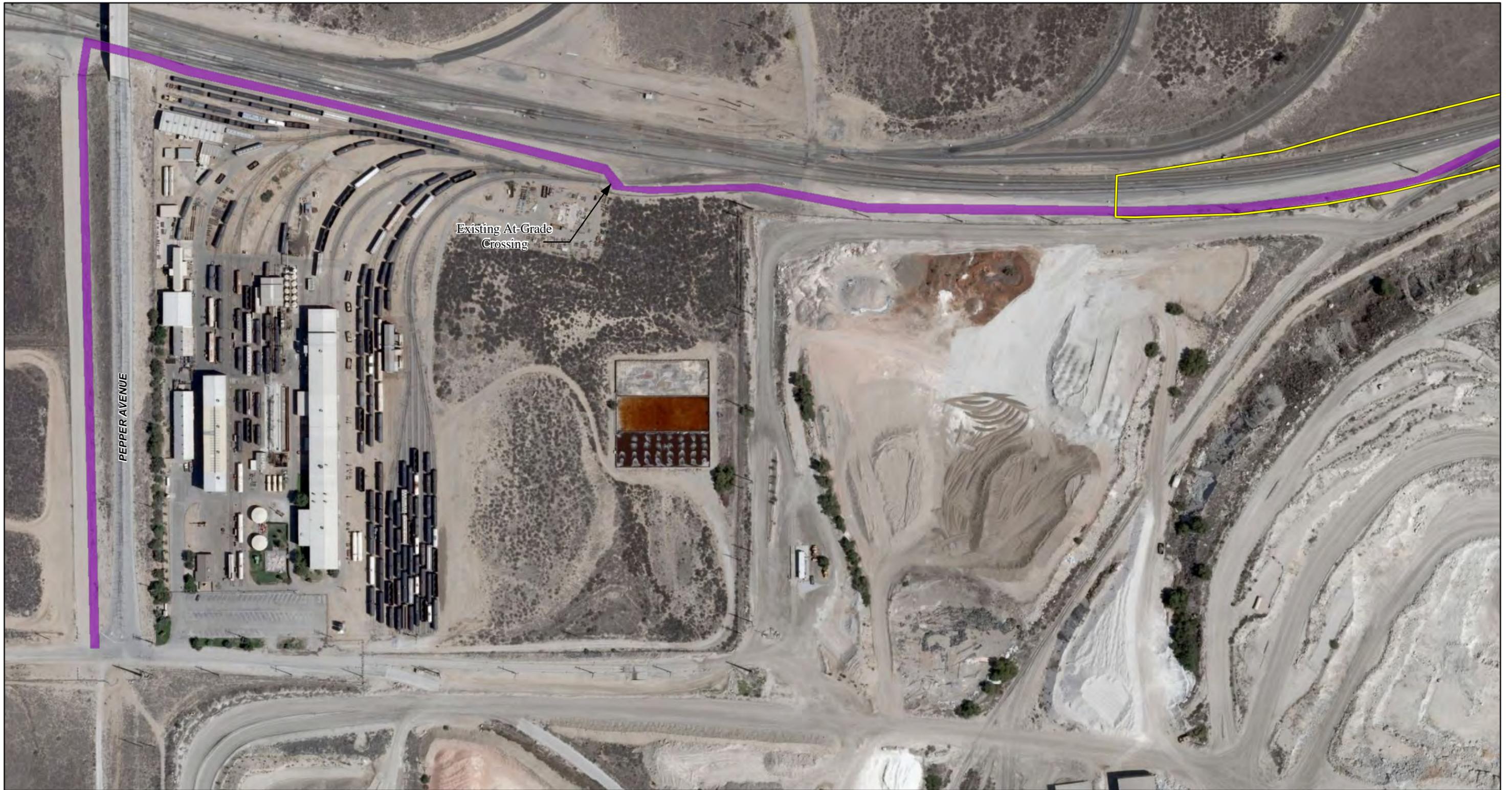
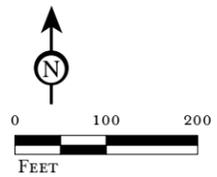
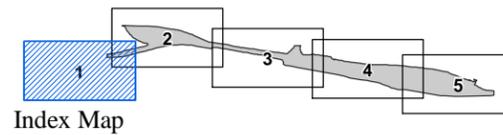


FIGURE 1.4  
Sheet 1 of 5



-  Project Boundary
-  Staging Area
-  Staging Area/Stockpiling
-  Construction Access Road



Colton Crossing Rail-to-Rail  
Grade Separation Project  
Initial Study

Construction Staging Areas and Access Points

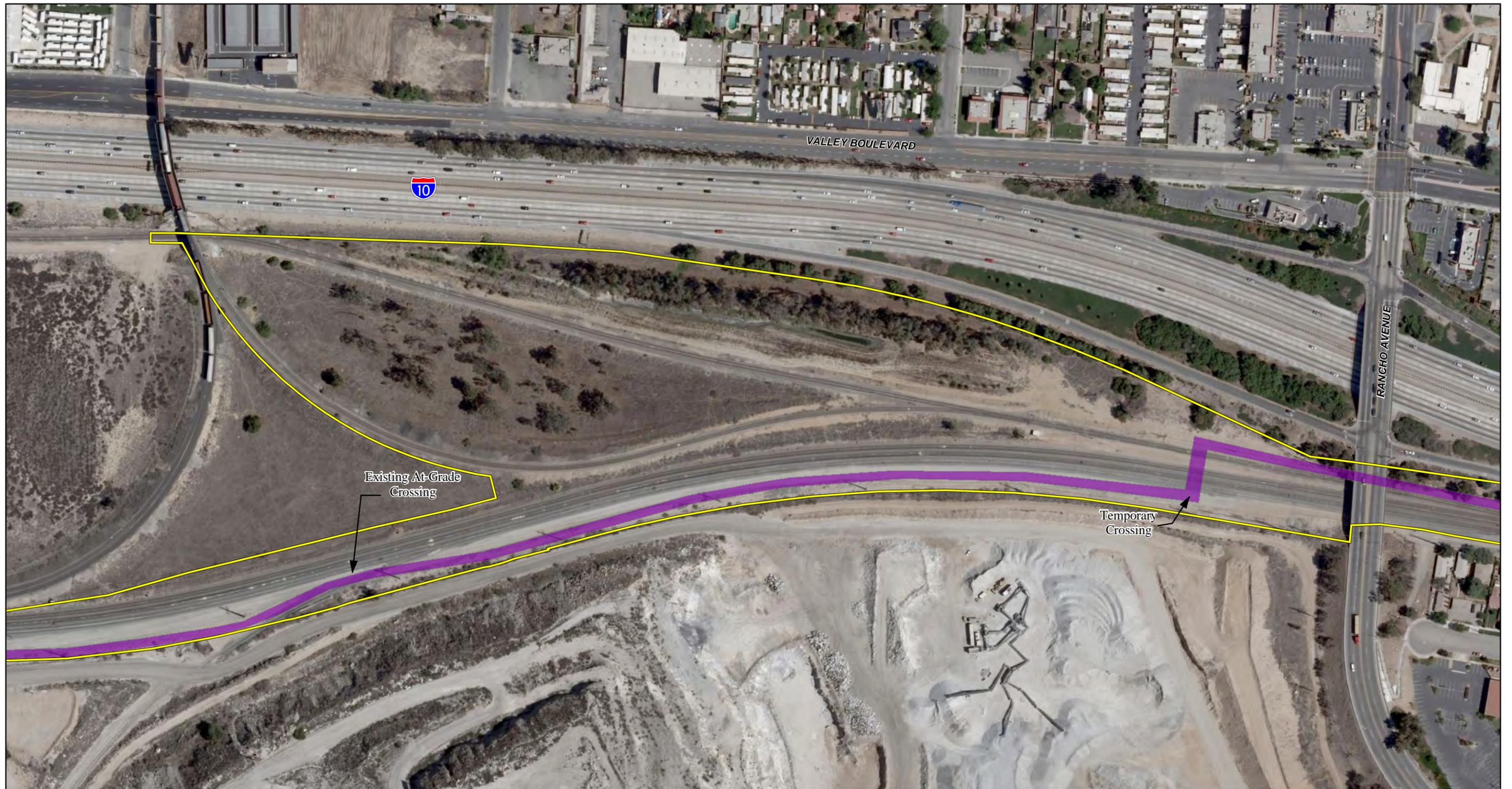
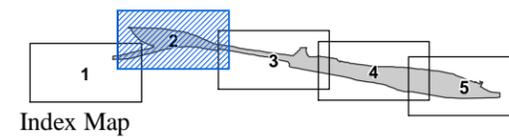
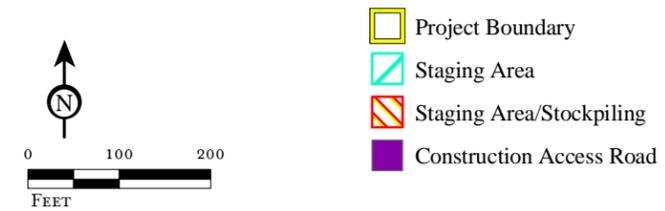


FIGURE 1.4  
Sheet 2 of 5



Colton Crossing Rail-to-Rail  
Grade Separation Project  
Initial Study

Construction Staging Areas and Access Points

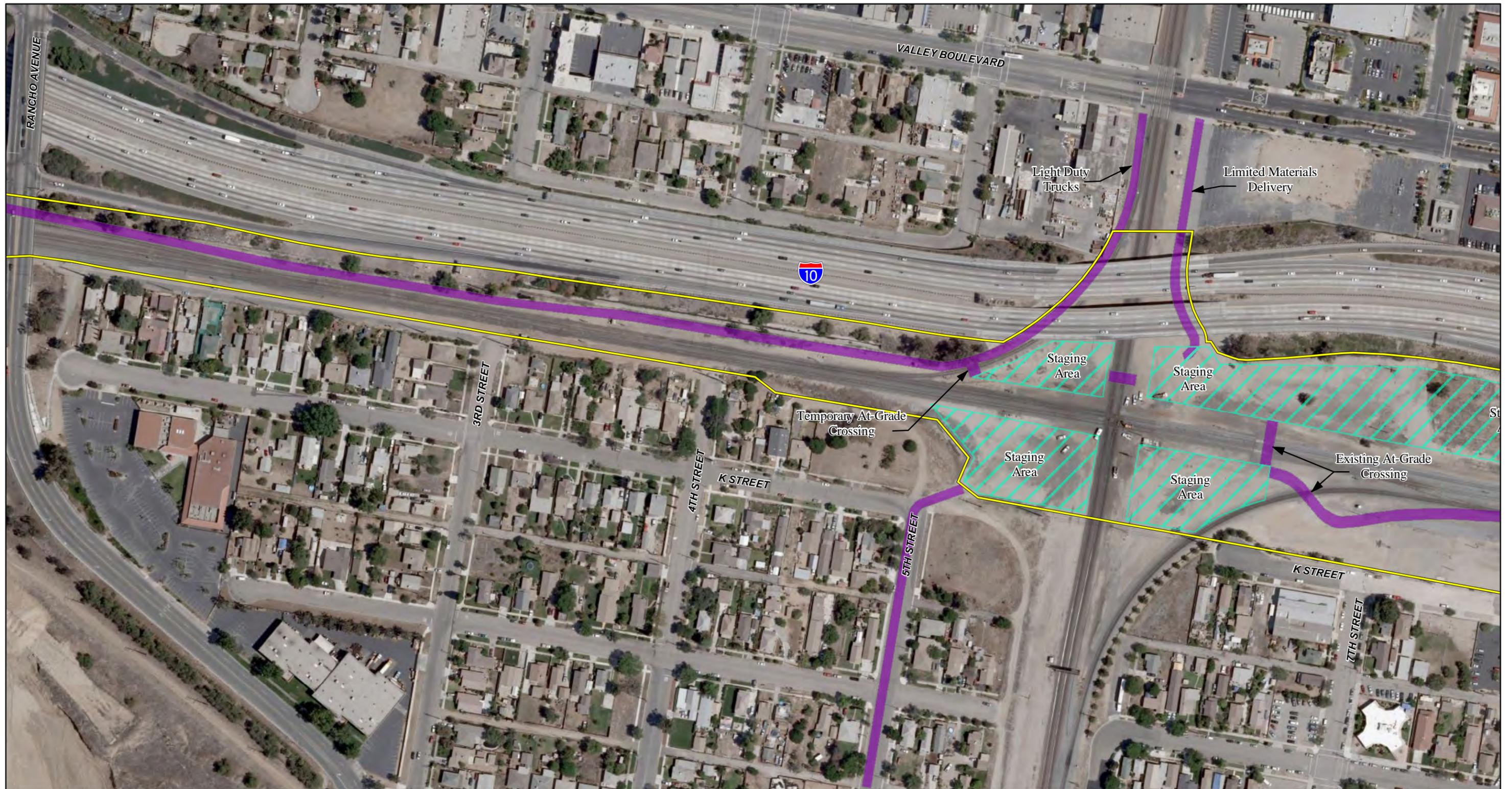
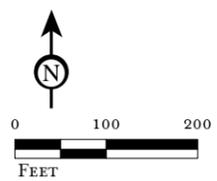
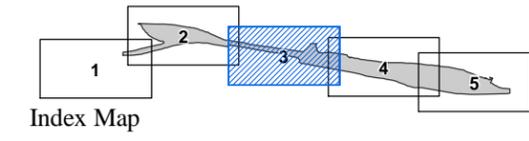


FIGURE 1.4  
Sheet 3 of 5



- Project Boundary
- Staging Area
- Staging Area/Stockpiling
- Construction Access Road



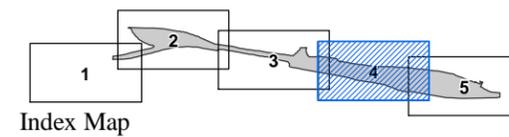
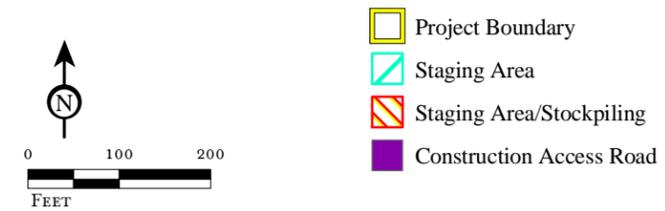
Colton Crossing Rail-to-Rail  
Grade Separation Project  
Initial Study

Construction Staging Areas and Access Points

SOURCE: HDR; BingMaps, 2009; Thomas Bros., 2009  
I:\HDR0802\Reports\IS\fig1-4\_ConstructionStagingAccess.mxd (02/09/10)



FIGURE 1.4  
Sheet 4 of 5



Colton Crossing Rail-to-Rail  
Grade Separation Project  
Initial Study

Construction Staging Areas and Access Points

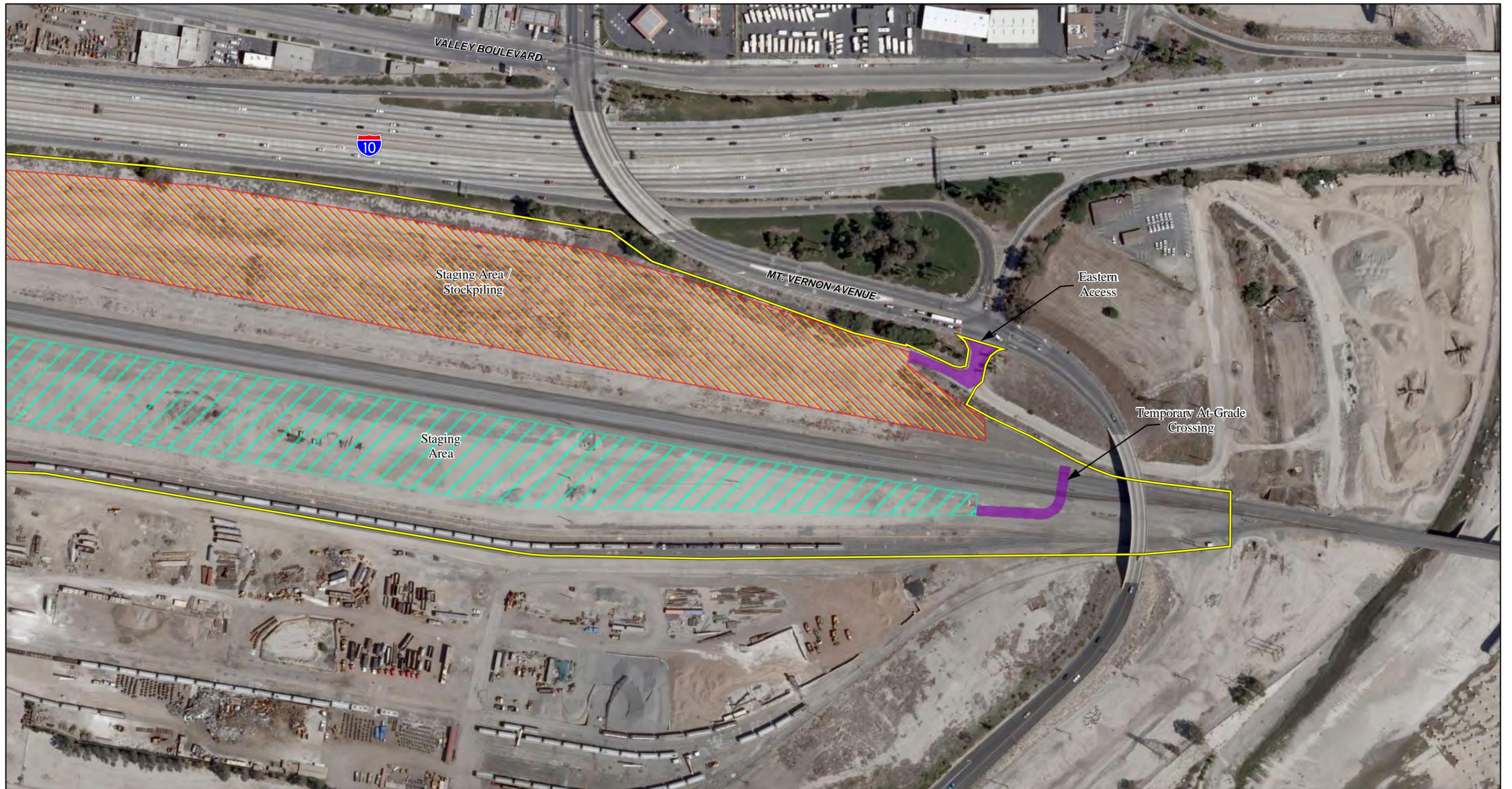
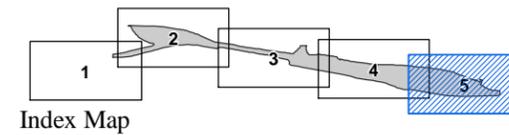
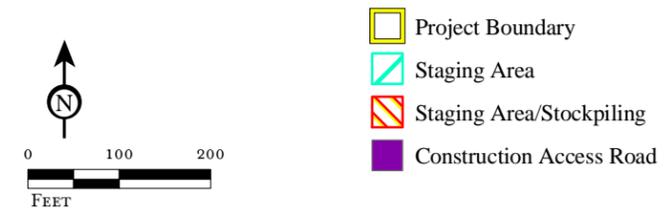


FIGURE 1.4  
Sheet 5 of 5



Colton Crossing Rail-to-Rail  
Grade Separation Project  
Initial Study

Construction Staging Areas and Access Points

## Chapter 2 – CEQA CHECKLIST

### Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project. Please see the checklist beginning on page 21 for additional information.

|                                     |                          |                                     |                                 |                                     |                                    |
|-------------------------------------|--------------------------|-------------------------------------|---------------------------------|-------------------------------------|------------------------------------|
| <input checked="" type="checkbox"/> | Aesthetics               | <input type="checkbox"/>            | Agriculture and Forestry        | <input checked="" type="checkbox"/> | Air Quality                        |
| <input checked="" type="checkbox"/> | Biological Resources     | <input checked="" type="checkbox"/> | Cultural Resources              | <input type="checkbox"/>            | Geology/Soils                      |
| <input type="checkbox"/>            | Greenhouse Gas Emissions | <input checked="" type="checkbox"/> | Hazards and Hazardous Materials | <input checked="" type="checkbox"/> | Hydrology/Water Quality            |
| <input type="checkbox"/>            | Land Use/Planning        | <input type="checkbox"/>            | Mineral Resources               | <input checked="" type="checkbox"/> | Noise                              |
| <input type="checkbox"/>            | Population/Housing       | <input type="checkbox"/>            | Public Services                 | <input type="checkbox"/>            | Recreation                         |
| <input checked="" type="checkbox"/> | Transportation/Traffic   | <input type="checkbox"/>            | Utilities/Service Systems       | <input type="checkbox"/>            | Mandatory Findings of Significance |

This CEQA checklist identifies physical, biological, social and economic factors of the human environment that might be affected by the proposed project. The checklist achieves the important statutory goal of integrating the requirements of CEQA with the environmental requirements of other laws.

In many cases, background studies performed in connection with the projects indicate no environmental impacts. A “NO IMPACT” answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included directly after the cited environmental resource. The words “significant” and “significance” used throughout the following checklist are related to CEQA, not NEPA, impacts.

On the basis of this initial evaluation:

|                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.  |
| <input checked="" type="checkbox"/> | I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.   |
| <input type="checkbox"/>            | I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.   |
| <input type="checkbox"/>            | I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. |
| <input type="checkbox"/>            | I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to the earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.                                    |

|   |   |
|---|---|
| <p style="text-align: center;"><i>Marie Petry</i></p> <p>Signature<br/>Marie Petry, Office Chief, Environmental Studies/Support B<br/>District 8 Division of Environmental Planning<br/>California Department of Transportation</p> | <p style="text-align: center;"><i>2/24/11</i></p> <p>Date</p> |
|---|---|

## Chapter 2 – CEQA CHECKLIST

### CEQA Environmental Checklist

08-San Bernardino

N/A

N/A

Dist.-Co.-Rte.

P.M/P.M.

E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

|  | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact        | No Impact                           |
|--|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| <b>I. AESTHETICS:</b> Would the project:   |                                |                                       |                                     |                                     |
| a) Have a substantial adverse effect on a scenic vista   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings?  | <input type="checkbox"/>       | <input checked="" type="checkbox"/>   | <input type="checkbox"/>            | <input type="checkbox"/>            |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| <b>II. AGRICULTURE AND FOREST RESOURCES:</b> In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project: |                                |                                       |                                     |                                     |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

## Chapter 2 – CEQA CHECKLIST

|  | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact | No Impact                           |
|--|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |

**III. AIR QUALITY:** Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

|  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Expose sensitive receptors to substantial pollutant concentrations?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) Create objectionable odors affecting a substantial number of people?  | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

**IV. BIOLOGICAL RESOURCES:** Would the project:

|  |                          |                          |                                     |                                     |
|--|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

## Chapter 2 – CEQA CHECKLIST

|  | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact        | No Impact                           |
|--|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?                                   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

### V. CULTURAL RESOURCES: Would the project:

|   |                          |                                     |                                     |                          |
|---|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?    | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5? | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?       | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Disturb any human remains, including those interred outside of formal cemeteries?                          | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

### VI. GEOLOGY AND SOILS: Would the project:

|  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| ii) Strong seismic ground shaking?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| iii) Seismic-related ground failure, including liquefaction?   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

## Chapter 2 – CEQA CHECKLIST

|  | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact        | No Impact                           |
|--|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| iv) Landslides?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Result in substantial soil erosion or the loss of topsoil?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

### VII. GREENHOUSE GAS EMISSIONS: Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

### VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

|                          |                          |                                     |                          |
|--------------------------|--------------------------|-------------------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

## Chapter 2 – CEQA CHECKLIST

|   | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <b>IX. HYDROLOGY AND WATER QUALITY:</b> Would the project:  |                                |                                       |                                     |                                     |
| a) Violate any water quality standards or waste discharge requirements?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| f) Otherwise substantially degrade water quality?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

## Chapter 2 – CEQA CHECKLIST

|   | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| j) Inundation by seiche, tsunami, or mudflow  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <b>X. LAND USE AND PLANNING:</b> Would the project:   |                                |                                       |                                     |                                     |
| a) Physically divide an established community?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Conflict with any applicable habitat conservation plan or natural community conservation plan?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <b>XI. MINERAL RESOURCES:</b> Would the project:  |                                |                                       |                                     |                                     |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <b>XII. NOISE:</b> Would the project result in:   |                                |                                       |                                     |                                     |
| a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

## Chapter 2 – CEQA CHECKLIST

|   | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| ) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

### XIII. POPULATION AND HOUSING: Would the project:

|   |                          |                          |                          |                                     |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

### XIV. PUBLIC SERVICES:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

|                          |                          |                          |                                     |                                     |
|--------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| Fire protection?         | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Police protection?       | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Schools?                 | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Parks?                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

## Chapter 2 – CEQA CHECKLIST

|   | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| <b>XV. RECREATION:</b>  |                                |                                       |                                     |                                     |
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <b>XVI. TRANSPORTATION/TRAFFIC:</b> Would the project:  |                                |                                       |                                     |                                     |
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| e) Result in inadequate emergency access?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| <b>XVII. UTILITIES AND SERVICE SYSTEMS:</b> Would the project:  |                                |                                       |                                     |                                     |
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

## Chapter 2 – CEQA CHECKLIST

|   | Potentially Significant Impact | Less Than Significant with Mitigation | Less Than Significant Impact        | No Impact                           |
|---|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?                                     | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/>       | <input type="checkbox"/>              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?  | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| g) Comply with federal, state, and local statutes and regulations related to solid waste?   | <input type="checkbox"/>       | <input type="checkbox"/>              | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

### XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

|  |                          |                                     |                                     |                          |
|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?   | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |

## Chapter 3 – CEQA CHECKLIST RESPONSES

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### I. AESTHETICS

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The following analysis is summarized from the *Draft Visual Impact Assessment* (November 2010) prepared for the proposed project by LSA Associates, Inc.

**a) Have a substantial adverse effect on a scenic vista?**

**No Impact.** The City of Colton General Plan<sup>1</sup> does not designate or identify any scenic vistas, scenic landforms, or scenic features within the project area. The County of San Bernardino General Plan<sup>2</sup> also does not designate or identify any specific scenic vistas, scenic landforms, or scenic features within the project area. While the City and County General Plans do not identify specific unique visual resources within the City or County, topographic features such as the ridgelines of the San Bernardino Mountains to the north, Blue Mountain and surrounding hills to the southeast, Slover Mountain to the west, and the La Loma Hills to the southwest of the project site that form skyline views and contribute to the character of the area were considered as visual resources.

A Visual Impact Assessment<sup>3</sup> (VIA) was prepared for the proposed project and according to the VIA, implementation of the proposed project would not result in any significant impacts to designated scenic vistas. In the absence of designated scenic vistas, there would be no impacts related to this issue.

**Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?**

**No Impact.** No State or local roadways in the vicinity of the project area are identified as scenic roadways. Additionally, this segment of I-10 is not considered a scenic highway by the State of California. No significant scenic resources were identified within or adjacent to the project limits. None of the built resources that were evaluated in the VIA appears eligible for listing in the National Register of Historic Places or the California Register of Historical Resources. Because I-10 and roadways in the project vicinity are not considered scenic highways or roadways and because no scenic resources are identified in the project vicinity no impact would occur.

**Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**c) Substantially degrade the existing visual character or quality of the site and its surroundings?**

**Less Than Significant With Mitigation.** Implementation of the proposed project would result in temporary visual changes due to grading and other construction activities. Potential short-term construction impacts would result from the proposed project through the presence of construction equipment and materials. Upon completion of the proposed project, equipment and

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<sup>1</sup> City of Colton. *Final Preliminary General Plan for the City of Colton*, adopted May 5, 1987.

<sup>2</sup> County of San Bernardino. *County of San Bernardino 2007 General Plan*, adopted March 13, 2007.

<sup>3</sup> LSA Associates, Inc., *Draft Visual Impact Assessment*, February 2011.

## Chapter 3 – CEQA CHECKLIST REPONSES

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construction materials would no longer be present. Temporary visual impacts associated with these impacts are less than significant.

The existing visual character and quality of the site and surroundings afforded from a commuter perspective from the I-10 freeway would change to some degree. Implementation of the proposed project would result in the introduction of new intermittent light sources from train headlights. Currently, the trains are located on tracks lower than the freeway and they do not affect motorists on the freeway. These new intermittent light sources may affect passing motorists on I-10 where the proposed structure comes in close proximity to the I-10; therefore, the proposed project includes the installation of glare screens within this segment of the structure to reduce the effects of glare from passing trains. The installation of railing and glare screens within this segment would introduce encroaching elements, but would minimally obstruct existing views. Other segments of the proposed structure would not be in close proximity to the I-10 freeway; therefore, glare screens are not required throughout the remaining structure as the intermittent light sources would not affect motorists. It is important to note that the railing will be installed throughout the proposed alignment; however, the installation of railing would not result in a significant degradation of the existing visual character or quality of the site. During periods when trains utilize the overcrossing structure, the existing views of Blue Mountain and surrounding hills and the La Loma Hills would be obstructed. It is important to note that passing trains utilizing the overcrossing structure would not permanently obstruct views of Blue Mountain and surrounding hills and the La Loma Hills. While there will be a physical change to the environment through the construction of a new overcrossing structure, the new structure would not result in the permanent obstruction of existing scenic features.

Adjacent residential and commercial development located south of the UPRR right-of-way and east of the crossing would not be affected by the construction of the new elevated structure as there would be a minimal contrast in scale and form due to the distance and the existing presence of the I-10 freeway structure. Adjacent residential development located south of the UPRR right-of-way and west of the crossing would be affected by the construction of the new elevated structure in the form of a moderate contrast in scale and form. Due to the placement of the proposed structure (the new overcrossing) proximate to existing residential uses, implementation of the proposed project would create a more enclosed space between residential properties and the I-10 freeway structure (as opposed to the existing separation between existing residential uses and the I-10 freeway structure). The installation of railing would introduce new vertical and horizontal lines as additional encroaching features into this viewshed resulting in a moderately low impact due to the presence of an extensive amount of existing encroaching features. This moderate contrast in scale and form is a potentially significant impact to these residential uses. With implementation of **Measure AES-1** presented below, visual impacts to residents southerly of the project area would be minimized. Further, with implementation of **Measure AES-2** presented below, visual impacts at these southerly residents would be reduced to a less than significant level.

### **Avoidance, Minimization and Mitigation Measures**

The following measures shall be implemented to avoid, minimize and/or mitigate potential adverse impacts on aesthetics to less than significant levels.

**AES-1** During the Project Study & Engineering phase, UPRR shall prepare a landscape program that addresses landscape treatment within the Caltrans right-of-way and within residential properties to the south of the UPRR right-of-way.

## Chapter 3 – CEQA CHECKLIST REPONSES

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This plan shall include landscape treatment along I-10 between Rancho Avenue and the freeway crossing of the BNSF railroad, within residential properties, and within City of Colton right-of-way to use areas adjacent to the project area for revegetation and it shall include landscaping with plant species compatible with the climatological conditions (e.g., xeric) of the geographic area while still promoting the enhancement of new project structures to the extent feasible. This program shall incorporate all applicable procedures and requirements as detailed in the publication Caltrans *Highway Design Manual*, Section 902.1, Planting Guidelines (November 2001), and the City of Colton General Plan.

The landscape program shall include, but shall not be limited to, the following components, as feasible within Caltrans right-of-way from Rancho Avenue to the BNSF grade separation structure:

- a. Maintain the visual planting character of the I-10 corridor;
- b. Consider guidance provided in the Interstate 10 Corridor Landscape Master Plan for landscaping;
- c. Incorporate all applicable procedures and requirements as detailed in the publication Caltrans *Highway Design Manual*, Section 902.1, Planting Guidelines (November 2001);
- d. Plant drought-resistant plants within the I-10 right-of-way, which promotes use of xeric (adapted to arid conditions) landscaping techniques; and
- e. Provide low-maintenance, erosion control groundcover species in the palette to preserve existing views and prevent erosion.

The landscape program shall include the following components, as feasible, within private residential parcels southerly of the UPRR right-of-way from Rancho Avenue to 5<sup>th</sup> Street and City-owned right-of-way on W. K Street and E. K Street, east of the existing Colton Crossing:

- f. Establish a Tree Planting Program that provides monies to residential property owners and the City of Colton within this area to plant trees within their property to screen views of the flyover structure. The Tree Planting Program shall provide adequate funds to provide for purchase and planting of a selected palette of tree species. Tree species to be included in the selected palette should emphasize drought-tolerant species and native species, but may also contain fruit-bearing trees. Trees within City right-of-way shall be consistent with the adopted City Tree Replacement Palette.

**AES-2** During final design, the UPRR shall incorporate aesthetic wall treatments into the final design of the proposed project. The selection process for aesthetic wall treatments shall be developed in consultation with the City of Colton and City-designated stakeholders. The selection of aesthetic wall treatments shall be based on the following criteria:

- Design shall include the application of a variety of textures and patterns to promote visual interest and to deter vandalism. Textures and patterns shall not consist of protruding features or shapes nor shall they include sharp edges; and

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- Design shall include the application of subtle reliefs at caps and/or parapets<sup>4</sup> to enhance shadow lines and to promote visual interest. Relief depth of textures and patterns and at caps and/or parapets shall be restricted to a maximum depth of 2 inches thereby facilitating inspection for cracking and structural deficiencies; and
- Design for wall treatments on the north side of the structure shall maintain compatibility with the I-10 Corridor Landscape Master Plan; and
- Design shall not incorporate bold or bright colors that may interfere with day-to-day railroad operations. To the extent feasible, concrete treatments shall be integral-colored or stained to reduce the frequency of maintenance activities; and
- Treatments shall be applied by form liner in basic patterns and repetitions so as to facilitate future maintenance and/or replacement; and
- Design of the treatment and materials used in the treatment shall consider graffiti control and the long-term need to remove graffiti.

**d) Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?**

**Less Than Significant Impact.** The study area currently receives light at night from traffic, street lighting, and lighted parking lots; signalization at the intersections and freeway on-ramps and off-ramps; signalization along the railroad corridors; and commercial zone and limited light sources from residential development. Some existing lighting (e.g., signal control lighting) within the railroad corridors would be modified or relocated as a part of the proposed project onto the structure. Along the elevated structure, new signal light sources would be introduced to maintain railroad operations. These signal lights would be in closer proximity to the existing I-10 freeway structure than the current condition. As previously identified, railroad signaling would be designed and placed in accordance with the FRA and California Public Utilities Commission regulations. Adherence to FRA and California Public Utilities Commission regulations as they relate to the design and placement of signaling would ensure light impacts from signaling devices are less than significant.

The proposed project also includes the installation of new light fixtures as a safety feature on the north side of the proposed structure in the vicinity of the Rancho Avenue ramps. The light fixtures would be shielded to focus the light on the ramp pavement and to avoid any spillover light effects outside of the of ramp pavement. Adjacent uses would not be affected by the installation of new light fixtures in this area of the proposed structure as residential uses south of the structure would be shielded behind the structure, and the commercial uses north of the freeway would not be affected due to the distance away from the new fixtures and because the fixtures would be shielded to minimize spillover effects. Light impacts from the proposed light fixtures in the vicinity of the Rancho Avenue ramps would be less than significant with implementation of **Mitigation Measure AES-3** indicated below.

Trains traveling along the new elevated structure would introduce a new source of light to passing motorists along I-10 from the locomotive headlights. While these instances of a new source of light would potentially affect visibility for drivers along I-10, the proposed project includes the installation of glare screens along the segment of the structure where the light from train headlights may affect nighttime drivers on I-10. With the project design, light and glare impacts from passing trains are considered less than significant.

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<sup>4</sup> a low wall or railing to protect the edge of a platform, roof, or bridge.

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The proposed project would create new sources of shadow and shade associated with construction of the elevated structure. However, the new sources of shadow and shade are not anticipated to have an impact to private properties to the south as shadows would not be cast out from the structure at a distance to affect these properties. Additionally, no shade or shadow impacts on replanted vegetation would occur because the plants would be carefully selected during design of the landscape program. Shade and shadow impacts associated with implementation of the proposed project are considered less than significant.

### **Avoidance, Minimization and Mitigation Measures**

The following measure shall be implemented to avoid, minimize or mitigate potential adverse impacts on aesthetics to less than significant levels.

**AES-3** During the Project Study & Engineering phase the UPRR will prepare a lighting plan for the I-10/Rancho Avenue ramps prior to construction. The lighting fixtures will be designed consistent with Caltrans lighting standards to minimize glare on adjacent properties and into the night sky. Lighting will be shielded and focused within the ramp right-of-way.

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## *II. AGRICULTURAL RESOURCES*

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### ***a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resource Agency, to non-agricultural use?***

**No Impact.** According to the Farmland Mapping and Monitoring Program (FMMP) maps of the California Resources Agency (CRA), the project site contains no land mapped as being Prime Farmland, Unique Farmland, or Farmland of Statewide Importance and no impact to farmland would occur.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

### ***b) Conflict with existing zoning for agricultural use or a Williamson Act contract?***

**No Impact.** The site has been dedicated to heavy rail-related use for many years, and that use will continue. According to the San Bernardino County Land Use Services Division geographic information system data, the project site does not contain any agricultural land uses or any land designated as a Williamson Act contract, therefore, there are no impacts in this regard.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

- c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Public Resources Code Section 51104(g).**

**No Impact.** According to the City of Colton and County of San Bernardino zoning maps, the project site contains no land zoned for forest or timber resources. The site has been dedicated to heavy rail-related use for many years, and that use will continue. Therefore, there are no impacts in this regard.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

- d) Result in the loss of forest land or conversion of forest land to non-forest use?**

**No Impact.** The project site contains no forestland or timberland. The site has been dedicated to heavy rail-related use for many years, and that use will continue. Therefore, there are no impacts in this regard.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

- e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use?**

**No Impact.** As discussed in Checklist Response II (a) and (b) neither the project site nor the surrounding area contains agricultural land or active farming, so there is no potential for conversion of any existing farmland to non-agricultural use.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

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## **III. AIR QUALITY**

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The analysis in this section is based on the *Air Quality Analysis* (February 2011) prepared by LSA Associates, Inc. and the current air quality guidelines as of December 2010.

- a) Conflict with or obstruct implementation of the applicable air quality plan?**

**No Impact.** An Air Quality Management Plan (AQMP) describes air pollution control strategies to be taken by counties or regions classified as nonattainment areas. The AQMP's main purpose is to bring the area into compliance with the requirements of federal and State air quality standards. The AQMP uses the assumptions and projections by local planning agencies to determine control strategies for regional compliance status. Therefore, any projects causing a significant impact on air quality would impede the progress of the AQMP.

## Chapter 3 – CEQA CHECKLIST REPONSES

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Air quality models are used to demonstrate that the project's emissions will not contribute to the deterioration or impede the progress of air quality goals stated in the AQMP. The air quality models use project-specific data to estimate the quantity of pollutants generated from the implementation of a project. The results for the future no project and proposed project scenarios in the horizon year demonstrate that the proposed project results in a reduction in criteria pollutants and greenhouse gas emissions as discussed further in Section III.b and III.c.

As discussed below, the proposed project would result in a net benefit to air quality and would not significantly contribute to or cause deterioration of air quality; therefore, mitigation measures are not required for the long-term operation of the project. Hence, the proposed project is considered consistent with the objectives of the AQMP and would not affect implementation of the AQMP.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

***b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?***

***and***

***c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?***

***Less Than Significant Impact.***

### **Short-term Emissions**

Construction activities produce combustion emissions of criteria pollutants from various sources such as site grading, utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, and motor vehicles transporting the construction crew. Exhaust and fugitive dust emissions generated during project construction will vary daily as construction activity levels change.

Construction activities produce combustion emissions from various sources such as utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, and motor vehicles transporting the construction crew. Exhaust emissions from construction activities envisioned on site would vary daily as construction activity levels change. The use of construction equipment on site would result in localized exhaust emissions.

### ***Equipment Exhaust and Related Construction Activities***

Construction of the proposed project has been split into multiple phases. The construction emissions associated with each of these phases was based on a construction schedule developed by HDR (October 2010). The total exhaust emissions generated within each of the construction phases are listed in Table 3.3.A.

## Chapter 3 – CEQA CHECKLIST RESPONSES

Throughout the construction schedule, the various construction phases will overlap. The worst-case condition is scheduled for 2012 when site grading, foundation work, retaining wall construction, the UPRR overhead structure construction, the connector overhead structure construction, and the La Cadena overhead structure construction will occur. Table 3.3.B lists the emissions that would be generated during each year of the current construction schedule. The emissions listed in Tables 3.3.A and 3.3.B were calculated using Tier 3 emission rates for all on-site equipment.

**Table 3.3.A: Construction Emissions by Sub-Phase (Tons)**

| Sub-Phase                           | CO              | ROCs | NO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
|-------------------------------------|-----------------|------|-----------------|------------------|-------------------|
| Relocate/Encase On-site Utilities   | 1.25            | 0.13 | 1.62            | 2.69             | 0.70              |
| A: Mobilization                     | NA <sup>1</sup> | NA   | NA              | NA               | NA                |
| B: Demolition, Clearing, & Grubbing | 0.16            | 0.02 | 0.22            | 0.37             | 0.09              |
| C: Install Drainage Improvements    | 1.28            | 0.15 | 1.83            | 0.49             | 0.18              |
| D: Site Grading                     | 1.16            | 0.13 | 1.56            | 2.61             | 0.67              |
| E: Foundation Work                  | 0.57            | 0.06 | 0.65            | 1.69             | 0.40              |
| F: Retaining Walls                  | 2.11            | 0.23 | 2.82            | 3.11             | 0.84              |
| G: BNSF OH Structure                | 4.49            | 0.42 | 5.04            | 6.11             | 1.67              |
| H: Connector OH Structure           | 7.66            | 0.79 | 9.91            | 12.20            | 3.33              |
| I: La Cadena OH Structure           | 3.00            | 0.28 | 3.37            | 4.07             | 1.11              |
| J: Trackwork                        | 6.05            | 0.74 | 9.99            | 3.63             | 1.42              |
| K: Construct Signal                 | 3.01            | 0.31 | 3.55            | 7.30             | 1.77              |

<sup>1</sup> On-road vehicle trips and off-road equipment usage during the mobilization phase is expected to be minimal. Source: LSA Associates, Inc., February 2011.

**Table 3.3.B: Annual Construction Emissions (Tons)**

| Year | CO   | ROCs | NO <sub>x</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
|------|------|------|-----------------|------------------|-------------------|
| 2011 | 4.9  | 0.5  | 6.4             | 7.4              | 2.0               |
| 2012 | 15.7 | 1.6  | <b>19.2</b>     | 24.2             | 6.6               |
| 2013 | 7.5  | 0.9  | <b>10.9</b>     | 9.3              | 2.7               |
| 2014 | 2.7  | 0.3  | 4.1             | 3.3              | 1.0               |

Source: LSA Associates, Inc., February 2011.

### ***Fugitive Dust***

Fugitive dust emissions are generally associated with land clearing, exposure, and cut-and-fill operations. Dust generated daily during construction would vary substantially, depending on the level of activity, the specific operations, and weather conditions. Nearby sensitive receptors and on-site workers may be exposed to blowing dust, depending upon prevailing wind conditions. Fugitive dust also would be generated as construction equipment or trucks travel on unpaved areas of the construction site and the access roads.

PM<sub>2.5</sub> and PM<sub>10</sub> emissions from construction operations were calculated based on the total acreage that would be disturbed during each construction phase and are included in the emissions listed in Tables 3.3.A and 3.3.B.

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The SCAQMD has established Rule 403 for reducing fugitive dust emissions. The best available control measures (BACM), as specified in SCAQMD Rule 403, will be required to be implemented during construction. With the implementation of standard construction measures (providing 50% effectiveness) such as frequent watering (e.g., minimum twice per day) and **Measures AQU-1 through AQU-4** indicated below, fugitive dust and exhaust emissions of criteria pollutants from construction activities would be less than significant.

### **Avoidance, Minimization and Mitigation Measures**

The following measures shall be implemented during construction activities to avoid or minimize potential adverse impacts on air quality.

- AQU-1** During clearing, grading, earthmoving, or excavation operations, excessive fugitive dust emissions will be controlled by regular watering or other dust preventive measures using the following procedures, as specified in the South Coast Air Quality Management District (SCAQMD) Rule 403. All material excavated or graded will be sufficiently watered to prevent excessive amounts of dust. Watering will occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. All material transported on site or off site will be either sufficiently watered or securely covered to prevent excessive amounts of dust. The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized so as to prevent excessive amounts of dust. These control techniques will be indicated in project specifications. Visible dust beyond the property line emanating from the project will be prevented to the maximum extent feasible.
- AQU-2** Project grading plans will show the duration of construction. Ozone precursor emissions from construction equipment vehicles will be controlled by maintaining equipment engines in good condition and in proper tune per manufacturer's specifications.
- AQU-3** All trucks that are to haul excavated or graded material on site will comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2), and (e)(4), as amended, regarding the prevention of such material spilling onto public streets and roads.
- AQU-4** Contractor will be required to provide evidence to the Resident Engineer or construction manager at the start of work and periodically (at least every 6 months) during construction that the off-road equipment fleet (s) and portable equipment in use comply with applicable State and South Coast AQMD vehicle fleet emission reduction regulations, including a vehicle and equipment inventory indicating appropriate ARB registration or air district permits.

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### ***Naturally Occurring Asbestos (NOA)***

The project is located in San Bernardino County, which is not among the counties listed as containing serpentine and ultramafic rock. Therefore, the impact from NOA during project construction would be minimal to none.

### **Long-term Emissions**

Implementation of the proposed project would reduce on-road delays at the rail to rail at-grade crossing within the project area. In addition, grade separating the Colton Crossing would increase the average train speeds and reduce idling in the project area. The following analyses were conducted to estimate the change in on-road and rail emissions within the project area.

### ***Vehicle Emissions***

The purpose of the proposed project is to alleviate existing and future rail congestion within Southern California. By increasing the average train speed in the project area the proposed project would reduce the gate down time<sup>5</sup> and on-road delays at the at-grade rail crossings.

The Vehicular Traffic Analysis (Iteris, September 2010) estimated the impact that the proposed project would have on vehicle delay at the at grade rail crossings in the project area. As shown in Table 3.3.C, the proposed project would reduce the vehicle idling in 2015 and 2035. The potential impact of the proposed project on project area vehicle emissions was calculated using the emission rates from the EMFAC2007 model.

**Table 3.3.C: Peak Hour Vehicle Delay**

| <b>At Grade Rail Crossing</b> | <b>Traffic Conditions</b> | <b>Total Vehicle Delay (min)</b> |
|-------------------------------|---------------------------|----------------------------------|
| Olive Street                  | 2015 No Build             | 969                              |
|                               | 2015 Build                | 499                              |
|                               | 2035 No Build             | 2,469                            |
|                               | 2035 Build                | 1,243                            |
| Valley Boulevard              | 2015 No Build             | 1,548                            |
|                               | 2015 Build                | 1,642                            |
|                               | 2035 No Build             | 4,477                            |
|                               | 2035 Build                | 4,770                            |

Source: Iteris, February 2011.

The vehicle delay data listed in Table 3.3.C, along with the EMFAC2007 emission rates, were used to calculate the CO, reactive organic gas (ROG), NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions for the 2015 and 2035 conditions. The results of the modeling are listed in Tables 3.3.D and 3.3.E. As shown, the proposed project would decrease the emissions within the project area. Therefore, the proposed project would not contribute significantly to vehicle emissions.

<sup>5</sup> Gate down time is amount of time a railroad crossing gate is down, stopping traffic where a roadway intersects with railroad tracks.

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**Table 3.3.D: 2015 Change in Vehicle Emissions (lbs/day)**

| Pollutant         | 2015 Without Project Emissions | 2015 With Project Emissions | Project-Related Change |
|-------------------|--------------------------------|-----------------------------|------------------------|
| CO                | 0.47                           | 0.40                        | -0.07                  |
| ROG               | 0.09                           | 0.08                        | -0.01                  |
| NO <sub>x</sub>   | 0.44                           | 0.37                        | -0.07                  |
| SO <sub>2</sub>   | 0.00                           | 0.00                        | 0.0                    |
| PM <sub>10</sub>  | 0.004                          | 0.004                       | 0.0                    |
| PM <sub>2.5</sub> | 0.004                          | 0.003                       | -0.001                 |
| CO <sub>2</sub>   | 35.1                           | 29.8                        | -5.3                   |

Source: LSA Associates, Inc., February 2011.

**Table 3.3.E: 2035 Change in Vehicle Emissions (lbs/day)**

| Pollutant         | 2035 Without Project Emissions | 2015 With Project Emissions | Project-Related Change |
|-------------------|--------------------------------|-----------------------------|------------------------|
| CO                | 1.49                           | 1.29                        | -0.2                   |
| ROG               | 0.25                           | 0.22                        | -0.03                  |
| NO <sub>x</sub>   | 1.42                           | 1.23                        | -0.19                  |
| SO <sub>2</sub>   | 0.001                          | 0.001                       | 0.0                    |
| PM <sub>10</sub>  | 0.006                          | 0.005                       | -0.001                 |
| PM <sub>2.5</sub> | 0.005                          | 0.004                       | -0.001                 |
| CO <sub>2</sub>   | 106.2                          | 91.9                        | -14.3                  |

Source: LSA Associates, Inc., February 2011.

In addition to the grade separations evaluated in the traffic analysis, the rail operation analysis prepared by HDR (September 2010) calculated the gate down time at 51 railroad crossings within the project study area. As shown in Table 3.3.F, the construction of the proposed project would reduce the average gate down time within the project area by 1.6 hours in the existing conditions, 5.7 hours in 2015, and 13.5 hours in 2035. This reduction in gate down time would reduce vehicle idling emissions within the project study area.

**Table 3.3.F: Change in Grade Crossing Average Delay (Hours)**

| Year | Baseline | With Project | Project-Related Change |
|------|----------|--------------|------------------------|
| 2010 | 92.5     | 90.9         | -1.6                   |
| 2015 | 91.3     | 86.6         | -5.7                   |
| 2035 | 172.0    | 158.5        | -13.5                  |

Source: HDR, February 2011.

By comparison, the Rail Operations Study determined the total gate down time at Olive Street and Valley Boulevard would be reduced by 1.2 hours and 1.9 hours in 2015 and 2035, respectively, which resulted in the vehicle emissions reductions identified in Tables 3.3.D and 3.3.E. When the reduction in total gate down time of 5.7 hours in 2015 and 13.5 hours in 2035 is applied to the number of vehicles at those 51 crossings, the total reduction in vehicle delay and corresponding reduction in emissions, is anticipated to be substantial based on the calculated results at Olive Street and Valley Boulevard.

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### **Rail Emissions**

Implementing the proposed project would reduce train idling and increase the average train speeds within the project study area. A rail operations analysis, prepared by HDR (February 2011), estimated the change in train speed and idling due to the proposed project.

Tables 3.3.G and 3.3.H summarize the increase in the average train speed and the reduction in idle time per train within the project study area. Using EPA emission rates and the data in Tables 3.3.G and 3.3.H the rail operation emissions within the project study area were calculated. Tables 3.3.I, 3.3.J, and 3.3.K summarize the change in rail emissions within the project study area. As shown, the proposed project would decrease the emissions of air pollutants within the area. Therefore, the proposed project would result in a net benefit related to rail emissions within the rail study area. The emissions in Tables 3.3.I through 3.3.K reflect the reduced idling time and increased speed of the trains no longer having to slow down and/or stop before proceeding through the Colton Crossing.

**Table 3.3.G: Change in Average Train Speed (mph)**

| Year | Without Project | With Project | Project-Related Change |
|------|-----------------|--------------|------------------------|
| 2010 | 17.3            | 26.7         | 9.4                    |
| 2015 | 15.6            | 26.8         | 11.2                   |
| 2035 | 3.3             | 5.7          | 2.4                    |

Source: HDR, February 2011.

**Table 3.H: Change in Idle Time per Train (Hours)**

| Year | Without Project | With Project | Project-Related Change |
|------|-----------------|--------------|------------------------|
| 2010 | 0.5             | 0.07         | -0.43                  |
| 2015 | 0.7             | 0.1          | -0.6                   |
| 2035 | 7.1             | 4.2          | -2.9                   |

Source: HDR, February 2011.

**Table 3.3.I: 2010 Change in Rail Emissions (lbs/day)**

| Pollutant         | 2010 Without Project Emissions | 2010 With Project Emissions <sup>1</sup> | Project-Related Change |
|-------------------|--------------------------------|--|------------------------|
| CO                | 4,632.0                        | 4,296.0                                  | -336.0                 |
| ROG               | 1,087.2                        | 1,008.0                                  | -79.2                  |
| NO <sub>x</sub>   | 26,460.0                       | 24,285.6                                 | -2,174.4               |
| SO <sub>2</sub>   | 152.6                          | 148.8                                    | -3.8                   |
| PM <sub>10</sub>  | 729.6                          | 672.0                                    | -57.6                  |
| PM <sub>2.5</sub> | 672.0                          | 619.2                                    | -52.8                  |
| CO <sub>2</sub>   | 83,040,000                     | 80,880,000                               | -2,160,000             |

Note: Baseline and with project emissions do not reflect actual regional rail emissions. The emissions are a representation of the change in regional rail operations that are anticipated due to the proposed project.

1. This scenario represents the proposed project as if it were constructed today.

Source: LSA Associates, Inc. February 2011.

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**Table 3.3.J: 2015 Change in Rail Emissions (lbs/day)**

| Pollutant         | 2015 Without Project Emissions | 2015 With Project Emissions | Project Related Change |
|-------------------|--------------------------------|-----------------------------|------------------------|
| CO                | 5,472.0                        | 4,992.0                     | -480.0                 |
| ROG               | 1,284.0                        | 1,168.8                     | -115.2                 |
| NO <sub>x</sub>   | 31,200.0                       | 28,149.6                    | -3,050.4               |
| SO <sub>2</sub>   | 183.6                          | 178.3                       | -5.3                   |
| PM <sub>10</sub>  | 861.6                          | 780.0                       | -81.6                  |
| PM <sub>2.5</sub> | 794.4                          | 717.6                       | -76.8                  |
| CO <sub>2</sub>   | 99,840,000                     | 96,960,000                  | -2,880,000             |

Note: Baseline and with project emissions do not reflect actual regional rail emissions. The emissions are a representation of the change in regional rail operations that are anticipated due to the proposed project.  
Source: LSA Associates, Inc. February 2011.

**Table 3.3.K: 2035 Change in Rail Emissions (lbs/day)**

| Pollutant         | 2035 Without Project Emissions | 2035 With Project Emissions | Project-Related Change |
|-------------------|--------------------------------|-----------------------------|------------------------|
| CO                | 16,320.0                       | 9,528.0                     | -6,792.0               |
| ROG               | 3,823.2                        | 2,232.0                     | -1,591.2               |
| NO <sub>x</sub>   | 99,984.0                       | 58,368.0                    | -41,616.0              |
| SO <sub>2</sub>   | 379.7                          | 368.4                       | -11.3                  |
| PM <sub>10</sub>  | 2,688.0                        | 1,569.6                     | -1,118.4               |
| PM <sub>2.5</sub> | 2,472.0                        | 1,442.4                     | -1,029.6               |
| CO <sub>2</sub>   | 206,400,000                    | 200,400,000                 | -6,000,000             |

Note: Baseline and with project emissions do not reflect actual regional rail emissions. The emissions are a representation of the change in regional rail operations that are anticipated due to the proposed project.  
Source: LSA Associates, Inc. February 2011.

A local rail emission analysis was conducted to determine if the proposed Colton Crossing project would affect the sensitive receptors within the vicinity of the existing rail to rail grade separation. Table 3.3.L summarizes the rail operations along the UPRR and BNSF track under the No Build and proposed project scenarios. The speeds listed in Table 3.3.L represent the rail speeds along the UPRR and BNSF tracks within the immediate vicinity of the Colton Crossing and are not representative of the entire project study area.

**Table 3.3.L: Local Train Operations**

| Category  | Without Project |        |        | Project |        |
|---|-----------------|--------|--------|---------|--------|
|   | 2010            | 2015   | 2035   | 2015    | 2035   |
| Number of Freight Trains per day on UPRR Tracks | 62              | 71     | 120    | 71      | 120    |
| Number of Freight Trains per day on BNSF Tracks | 62              | 71     | 120    | 71      | 120    |
| Train Speed UPRR Main Tracks                    | 20 mph          | 16 mph | 16 mph | 22 mph  | 22 mph |
| Train Speed BNSF Main Tracks                    | 22 mph          | 18 mph | 18 mph | 28 mph  | 28 mph |

Source: HDR, February 2011.

Using EPA emission rates and the data in Table 3.3.L, the local rail operation emissions were calculated. Tables 3.3.M and 3.3.N summarize the change in local rail emissions. As shown, the proposed project would decrease the emissions of air pollutants within the area. Therefore, the proposed project would have a net benefit related to local rail emissions.

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**Table 3.3.M: 2015 Change in Local Rail Emissions (lbs/day)**

| Pollutant         | 2015 Without Project Emissions | 2015 With Project Emissions | Project-Related Change |
|-------------------|--------------------------------|-----------------------------|------------------------|
| CO                | 2,136                          | 1,656                       | -480                   |
| ROG               | 504                            | 384                         | -120                   |
| NO <sub>x</sub>   | 12,000                         | 9,360                       | -2,640                 |
| SO <sub>2</sub>   | 71                             | 59                          | -12                    |
| PM <sub>10</sub>  | 336                            | 264                         | -72                    |
| PM <sub>2.5</sub> | 312                            | 240                         | -72                    |

Note: Baseline and with project emissions do not reflect actual regional rail emissions. The emissions are a representation of the change in regional rail operations that are anticipated due to the proposed project.  
Source: LSA Associates, Inc. February 2011.

**Table 3.3.N: 2035 Change in Local Rail Emissions (lbs/day)**

| Pollutant         | 2035 Without Project Emissions | 2035 With Project Emissions | Project-Related Change |
|-------------------|--------------------------------|-----------------------------|------------------------|
| CO                | 3,576                          | 2,808                       | -768                   |
| ROG               | 840                            | 672                         | -168                   |
| NO <sub>x</sub>   | 20,112                         | 15,840                      | -4,272                 |
| SO <sub>2</sub>   | 84                             | 106                         | 22                     |
| PM <sub>10</sub>  | 552                            | 432                         | -120                   |
| PM <sub>2.5</sub> | 504                            | 408                         | -96                    |

Note: Baseline and with project emissions do not reflect actual regional rail emissions. The emissions are a representation of the change in regional rail operations that are anticipated due to the proposed project.  
Source: LSA Associates, Inc. February 2011.

The Colton Crossing structure introduces a new hump into the vertical alignment of the UPRR Alhambra and Yuma Subdivisions. The existing alignment has a local summit near Milepost 533 at an elevation of approximately 1,103 feet above sea level. The mainline then descends through Colton Crossing at Milepost 538.70 to a low point where it crosses the Santa Ana River at Milepost 539.9 at an elevation of 948 feet. The mainline then ascends nearly continuously to a major regional summit at Milepost 562.8 near Beaumont, at an elevation of 2,591 feet. The new structure would introduce a new minor summit at an elevation of approximately 988 feet. This new summit will not introduce a substantial effect on locomotive effort for trains, and thus a local emissions increase in comparison to the existing vertical alignment, for the following reasons:

1. Most westbound trains operating on the UPRR mainline over Colton Crossing stop at West Colton Yard, which stretches from Milepost 532.5 to Milepost 537.7, to change train crews, exchange train cars, or to terminate. Similarly, most eastbound trains operating on the UPRR mainline over Colton Crossing are accelerating from a standstill at West Colton Yard. Westbound trains are braking while descending from Beaumont, both to control speed on the descent and ultimately to stop at West Colton in both the proposed project and without the project, and the introduction of the hump for the Colton Crossing structure will serve to absorb braking effort and not introduce a requirement for additional tractive effort to overcome the grade. Eastbound trains accordingly are accelerating from a stop at West Colton in either with the proposed project or without the project.
2. Many westbound and eastbound trains operating on the UPRR mainline at present must stop at Colton Crossing to wait for conflicting train movements on the BSNF mainline to clear.

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The Colton Crossing structure would eliminate the requirement for this stop. Thus, the tractive effort used to both brake UPRR trains to a stop, and then accelerate UPRR trains back to their best available track speed, is no longer required once trains begin using the Colton Crossing structure.

3. Due to the length of typical freight trains (in excess of 5,000 feet), the very low acceleration rates of trains (compared to rubber-tired vehicles), and the requirement to avoid excessive slack run-ins or run-outs of train car couplings, trains tend to “net out” local perturbations in vertical alignment. The Colton Crossing structure is compared to the local vertical topography a minor hump. Westbound trains will tend to coast over the structure to avoid slack run-outs as they descend from Beaumont: westbound trains will typically have slack bunched against the locomotives as they approach the low point at the Santa Ana River; a heavy application of tractive effort would tend to accelerate the front end of the train away from the rear end of the train and potentially exceed coupling strength between cars toward the midpoint of the train. Eastbound trains will tend to accelerate slowly when leaving Colton and avoid use of full throttle until the entire train is beyond the Santa Ana River to avoid slack run-ins caused when the front end of the train decelerates rapidly when it encounters the ascending grade beyond the Santa Ana River, while the rear end of the train is simultaneously attempting to accelerate while descending the Colton Crossing Structure.

Accordingly, the proposed project will not increase local train tractive effort and thus locomotive emissions, and compared to the existing rail alignment requiring many trains to stop at the Colton Crossing, the flyover will serve to decrease local tractive effort and thus emissions.

### ***d) Expose sensitive receptors to substantial pollutant concentrations?***

***Less than Significant Impact.***

#### **MSAT Emission Analysis**

The basic procedure for analyzing emissions for on-road Mobile Source Air Toxics (MSAT) is to calculate emission factors using EMFAC2007 and apply the emission factors to speed and VMT data specific to the project. EMFAC2007 is the latest emission inventory model developed by the ARB and approved by the EPA that calculates emission inventories for motor vehicles operating on roads in California. The emission factors information used in this analysis is from EMFAC2007 and is specific to the South Coast Air Basin.

This analysis focuses on seven MSAT pollutants identified by the EPA as being the highest priority MSATs.<sup>6</sup> These are acrolein, benzene, 1,3-butadiene, diesel particulate matter plus diesel exhaust organic gases (DPM), formaldehyde, naphthalene, and POM. EMFAC2007 provides emission factor information for DPM, but does not provide emission factors for the remaining six MSATs. Each of the remaining six MSATs, however, is a constituent of motor vehicle ROG emissions, and EMFAC2007 provides emission factors for ROG. The Air Resources Board (ARB) has supplied the Department with “speciation factors” for four MSATs not directly estimated by EMFAC2007. Each speciation factor represents the portion of total ROG emissions that is estimated to be a given MSAT. For example, if a speciation factor of 0.03 is provided for benzene, its emissions level is estimated to be 3 percent of total ROG emissions, utilizing the speciation factor as a multiplier once total ROG emissions are known. However, the ARB has not

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<sup>6</sup> U.S. Environmental Protection Agency (2001) Control of Emissions of Hazardous Air Pollutants from Mobile Sources: Final Rule. *Federal Register*, Vol. 66, No. 61, pp. 17230–17273. March 29.

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provided speciation factors for naphthalene and POM. This analysis used the ARB-supplied speciation factors to estimate emissions of the aforementioned MSATs as a function of ROG emissions.

### **MSAT Emission Results**

The emission factors from EMFAC2007 are pollutant emissions in grams per mile of vehicle travel and grams per hour for vehicle idling. Multiplying these emission factors by the total vehicle delay listed in previously referenced Table 3.3.C provides an estimate of the emissions within the project area.

Vehicle emissions vary by speed. Generally, emissions are higher on a grams-per-mile basis for slower speeds. For some pollutants, including volatile organic compounds (VOC), emissions increase with speed at speeds greater than 50 mph. The average a.m. and p.m. peak hour vehicle speeds in the project area were provided by Iteris (October 2010).

As described above, emission factors for DPM and ROG have been obtained for the Basin using EMFAC2007. Results of the analyses are tabulated in Tables 3.3.O and 3.3.P, which show implementation of the proposed project would result in a decrease in on-road MSAT emissions.

In addition to the on-road emissions, the proposed project would reduce the rail delay and increase the average train speed within Southern California. Table 3.3.Q summarizes the rail DPM emissions within the project study area and shows implementation of the proposed project would result in a decrease in rail DPM emissions compared to the without project condition.

The emissions in Tables 3.3.O through 3.3.Q reflect the reduced idling time and increased speed of the trains no longer having to slow down and/or stop before proceeding through the Colton Crossing and the reduced vehicle idling emissions due to the reduced gate down time at the road/rail at-grade crossings in the rail study area.

### **Toxic Air Contaminants**

The following discussion of toxic air contaminants (TAC) evaluates two issues: (1) the general health risks of air toxics and the current contribution of diesel trucks to those risks; and (2) the project's potential air toxics impact.

**Table 3.3.O: 2015 Changes in MSAT Emissions**

| Year 2015<br>Toxic Air Contaminant | Existing<br>Emissions<br>(g/day) | 2015 Without<br>Project<br>Emissions<br>(g/day) | 2015 Project Emissions |                            |                              |
|------------------------------------|----------------------------------|---|------------------------|----------------------------|------------------------------|
|                                    |                                  |   | g/day                  | Change<br>from<br>Existing | Change<br>from No<br>Project |
| Diesel Particulate Matter          | 10.6                             | 18.6  | 15.9                   | 5.3                        | -2.7                         |
| Benzene                            | 9.1                              | 16.3  | 13.4                   | 4.3                        | -2.9                         |
| 1,3-Butadiene                      | 1.71                             | 3   | 2.53                   | 0.82                       | -0.47                        |
| Naphthalene <sup>1</sup>           | N/A                              | N/A   | N/A                    | N/A                        | N/A                          |
| POM <sup>1</sup>                   | N/A                              | N/A   | N/A                    | N/A                        | N/A                          |
| Acrolein                           | 0.215                            | 0.39  | 0.331                  | 0.116                      | -0.059                       |
| Formaldehyde                       | 3.6                              | 6.3   | 5.3                    | 1.7                        | -1                           |
| Average Percentage Change          | –                                | –   | –                      | +76.7%                     | -16.0%                       |

<sup>1</sup> The emissions for these pollutants are not included because speciation factors are not available.

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**Table 3.3.O: 2015 Changes in MSAT Emissions**

| Year 2015<br>Toxic Air Contaminant | Existing<br>Emissions<br>(g/day) | 2015 Without<br>Project<br>Emissions<br>(g/day) | 2015 Project Emissions |                            |                              |
|------------------------------------|----------------------------------|---|------------------------|----------------------------|------------------------------|
|                                    |                                  |   | g/day                  | Change<br>from<br>Existing | Change<br>from No<br>Project |

g/day = grams per day

MSAT = Mobile Source Air Toxics

N/A = Not Available

Source: LSA Associates, Inc. February 2011.

**Table 3.3.P: 2035 Changes in MSAT Emissions**

| Year 2035<br>Toxic Air Contaminant | Existing<br>Emissions<br>(g/day) | 2035 Without<br>Project<br>Emissions<br>(g/day) | 2035 Project Emissions |                            |                              |
|------------------------------------|----------------------------------|---|------------------------|----------------------------|------------------------------|
|                                    |                                  |   | g/day                  | Change<br>from<br>Existing | Change<br>from No<br>Project |
| Diesel Particulate Matter          | 10.6                             | 45  | 38.8                   | 28.2                       | -6.2                         |
| Benzene                            | 9.1                              | 39  | 33.6                   | 24.5                       | -5.4                         |
| 1,3-Butadiene                      | 1.71                             | 7.3   | 6.2                    | 4.49                       | -1.1                         |
| Naphthalene <sup>1</sup>           | N/A                              | N/A   | N/A                    | N/A                        | N/A                          |
| POM <sup>1</sup>                   | N/A                              | N/A   | N/A                    | N/A                        | N/A                          |
| Acrolein                           | 0.215                            | 0.94  | 0.79                   | 0.575                      | -0.15                        |
| Formaldehyde                       | 3.6                              | 15.1  | 12.8                   | 9.2                        | -2.3                         |
| Average Percent Change             | –                                | –   | –                      | +265%                      | -14.1%                       |

<sup>1</sup> The emissions for these pollutants are not included because speciation factors are not available.

gms/day = grams per day

MSAT = Mobile Source Air Toxics

N/A = Not Available

Source: LSA Associates, Inc., February 2011.

**Table 3.3.Q: Change in Rail Diesel PM Emissions (g/day)**

| Year | Without Project Emissions | Project Emissions | Project Related Change |
|------|---------------------------|-------------------|------------------------|
| 2010 | 331,300                   | 305,350           | -25,950                |
| 2015 | 391,600                   | 354,500           | -37,100                |
| 2035 | 1,219,000                 | 712,000           | -507,000               |

Source: LSA Associates, Inc., February 2011.

Determining how hazardous a substance is depends on many factors, including the amount, how it enters the body, how long the exposure is, and what organs in the body are affected. One major way these substances enter the body is through inhalation in either gas or particulate form. While many gases are harmful, very small particles penetrate deep into the lungs, contributing to a range of health problems. Exhaust from diesel engines is a major source of these airborne particles. California's Office of Environmental Health Hazard Assessment (OEHHA) has determined that long-term exposure to diesel exhaust particulates poses the highest cancer risk of any toxic air contaminant it has evaluated. Fortunately, improvements to diesel fuel and diesel engines have already reduced emissions of some of the pollutants associated with diesel exhaust. The ARB has developed a Diesel Risk Reduction Plan which, when fully implemented, will result in a 75 percent reduction in particle emissions from diesel equipment by 2010 (compared to 2000 levels) and an 85 percent reduction by 2020.

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As discussed above, it is not expected that implementation of the proposed project will cause a significant increase in toxic air constituents. In fact, since motor vehicles produce more exhaust per mile at slower speeds, and since the proposed project would increase rail speeds and reduce vehicle delay, the effect of the proposed project should be to reduce emissions and therefore exposure of toxic constituents to the population.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

#### **e) Create objectionable odors affecting a substantial number of people?**

**Less than Significant Impact.** Some objectionable odors may emanate from the operation of diesel-powered construction equipment during construction of the project. These odors, however, would be limited to the site only during the construction period and therefore would not be considered a significant impact.

The railway is operated on diesel-powered engines that pull or push the train cars. There would be no change in the number of trains passing through the area but the number of trains left idling waiting to get through the Colton Crossing would be diminished; therefore, during operations there may be a slight decrease in the odor of diesel fuel in the area directly adjacent to the existing mainline tracks.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

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## IV. BIOLOGICAL RESOURCES

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The potential for the proposed project to result in adverse impacts to biological resources was assessed in the *Natural Environment Study (Minimal Impacts)* (February 2011) prepared by LSA Associates, Inc. The discussion below is based on that analysis.

#### **a) Have a substantial adverse effect, either directly or indirectly or through habitat modification, on any species identified as a candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?**

**Less than Significant Impact.** The proposed project would not result in direct temporary or permanent impacts to threatened, endangered, or special-status plant or animal species because they are considered absent from the Biological Study Area (BSA). There is suitable habitat (soils and vegetation) for the Delhi sands flower-loving fly (DSF) adjacent to the western portion of the BSA. Due to the proximity to suitable habitat, there is the potential for indirect effects to this habitat through fugitive dust, soil erosion and off-road travelling. In addition to the dust suppression measures identified in Section III, Air Quality, and the stormwater control measures outlined in Section IX, Hydrology and Water Quality, installation of temporary fencing along the construction limits adjacent to suitable DSF habitat, as specified in **Measure BIO-1**, presented below, would be sufficient for avoiding direct and indirect effects to the Delhi sands flower-

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loving fly habitat adjacent to the BSA. and impacts to candidate, sensitive, or special status species would be less than significant.

Construction of the proposed project includes vegetation removal, including vegetation identified as invasive. However, construction of the proposed project also has the potential to spread invasive species by the entering and exiting of construction equipment contaminated by invasive species, disturbances to soil surfaces, and improper removal and disposal of invasive species, which results in the seed being spread along the roadway and construction area. With implementation of the **Measures BIO-2, BIO-3, and BIO-4**, presented below, potential project-related impacts related to invasive species would be avoided or minimized and are considered less than significant.

### **Avoidance, Minimization and Mitigation Measures**

The following measures shall be implemented during construction activities to avoid or minimize potential adverse impacts on biological resources.

**BIO-1** Prior to initiation of grading activities and staging, the contractor shall install temporary snow fencing along the access roads and grading limits adjacent to identified DSF habitat under the direction of a qualified biologist. This fencing shall be maintained throughout the construction period. If the fencing is damaged for any reason, said fencing shall be replaced within three working days. These fencing areas and requirements shall be shown on project plans and included in the PS&E package approved by UPRR.

**BIO-2** In compliance with Executive Order 13112, during construction, invasive species will be removed and controlled within the construction limits. This requirement shall be incorporated into the plans and specification approved by UPRR.

**BIO-3** During construction, inspection and cleaning of construction equipment will be performed to minimize the importation of nonnative plant material, and eradication strategies (i.e., weed abatement programs) will be employed should an invasion occur. This requirement shall be incorporated into the plans and specifications approved by UPRR

**BIO-4** In compliance with Executive Order 13112, any revegetation, including erosion control, will utilize plant species that prevent the introduction or spread of invasive species, and use of species listed on the California Invasive Plant Council's Invasive Plant Inventory with a high or moderate rating shall be avoided. The plant palette for any revegetation shall be prepared by a licensed landscape architect, consistent with the requirements of EO 13112, and shall be included in the plans and specifications approved by UPRR

***b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?***

**No Impact.** The majority of the BSA is considered to be highly disturbed and dominated by ruderal and ornamental species. The only vegetation impacted by the proposed project is considered to be non-special-status vegetation communities. There is 0.09 acre of willow

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scrub/hydrophytic vegetation associated with Drainage Feature 2 present in the BSA that would be avoided. The proposed project would not impact riparian habitat or other sensitive natural communities.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**c) *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?***

***Less than Significant Impact.*** There are three drainage features present within the BSA. The proposed project would avoid impacts to Drainage Feature 2. The proposed project would result in the permanent loss of Drainage Features 1 and 3. These open drainage ditches would be converted into belowground storm drain channels and connect to the existing belowground storm drain system. Drainage Feature 1 has 0.01 acre of United States Army Corp of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) jurisdictional area and 0.05 acre of California Department of Fish and Game (CDFG) jurisdictional area. Drainage Feature 3 has 0.09 acre of USACE and RWQCB jurisdictional area and 0.38 acre of CDFG jurisdictional area. Therefore, the proposed project would result in permanent impacts to 0.10 acre of USACE jurisdictional areas (non-wetland waters), 0.10 acre of RWQCB jurisdictional areas, and 0.43 acre of CDFG jurisdictional areas. There are no USACE wetlands in the project area; therefore, no wetlands would be impacted by the proposed project.

Since most of the runoff conveyed downstream from Drainage Features 1 and 3 either evaporates or percolates into the groundwater prior to reaching the Santa Ana River and since surface runoff that does ultimately reach the Santa Ana River does so only during extreme storm events or heavy rainfall years, it is likely the USACE would conclude that the loss of Drainage Features 1 and 3 would not have a substantial adverse effect on the chemical, physical, or biological integrity of downstream traditional navigable waters. In addition, Drainage Features 1 and 3 are artificial drainage ditches constructed primarily for flood control purposes, are highly disturbed, and lack sufficient resources suitable for supporting native fish and wildlife species. Based on these existing conditions, impacts to Drainage Features 1 and 3 would be less than significant.

**Measures BIO-5, BIO-6, and BIO-7** identified below, are required to ensure compliance with applicable laws and regulations. Any compensatory measures for impacts to USACE, RWQCB, or CDFG would be determined during the permitting process.

### **Avoidance, Minimization and Mitigation Measures**

The following measures shall be implemented during construction activities to avoid or minimize potential adverse impacts on biological resources.

**BIO-5** Prior to initiating construction, Union Pacific Railroad (UPRR) shall submit a Pre-Construction Notification (PCN) form and Preliminary Jurisdictional Determination to the United States Army Corps of Engineers (USACE) to obtain coverage under a Nationwide Permit (NWP), pursuant to Section 404 of the Federal Clean Water Act (CWA).

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If compensatory measures are required by the USACE, the appropriate type and level of compensation shall be determined in coordination with the USACE based on the quantity and quality of jurisdictional resources to be affected. Typical compensation could include replacement and/or enhancement of on-site or off-site habitat. An example of compensatory measures would be the payment of in lieu fees or the purchase of established mitigation bank credits for enhancement of some identified USACE jurisdictional area. The specific mitigation bank is subject to approval by the USACE and possibly in coordination with the California Department of Fish and Game (CDFG) and the Santa Ana Regional Water Quality Control Board (RWQCB) under guidelines described by these regulatory agencies through the permitting process. Applicable compensatory measures would be in-lieu fee contribution to County of Riverside Parks and Open Space-Santa Ana River Mitigation Bank or a Santa Ana Watershed Association riparian and wetland restoration/enhancement project.

**BIO-6** In the event that a Section 404 authorization or permit is required for the proposed project, UPRR shall submit an application for a 401 Water Quality Certification to the Santa Ana RWQCB and obtain a certification of water quality from the Santa Ana RWQCB prior to initiating construction. In the event that a Section 404 authorization or permit is not required for the proposed project, then prior to initiating construction, UPRR shall submit an application for a State waste discharge permit to the Santa Ana RWQCB for proposed impacts to Waters of the State and obtain appropriate authorization from RWQCB.

**BIO-7** Prior to obtaining initiation of construction, UPRR shall submit a Lake or Streambed Alteration Notification (SAN) to the CDFG for their review. The CDFG may or may not choose to issue a Streambed Alteration Agreement. Notification from the CDFG of either issuance of an Alteration Agreement or determination that it is not required shall be obtained prior to initiating construction.

***d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native or resident migratory wildlife corridors, or impeded the use of native wildlife nursery sites?***

***Less than Significant Impact.*** The site is located along an urban area that is already highly disturbed. No wildlife movement corridors or fish passages currently exist within the BSA. The concrete and channelized Santa Ana River is located approximately 350 feet east of the BSA. However, this portion of the river nearest the BSA is not vegetated, and the area between the river and the BSA is also highly disturbed and consists of ruderal vegetation and developed areas. The proposed project would not impact wildlife movement corridors or interfere with wildlife movement or fish passage in the vicinity of the BSA or in the Santa Ana River.

Vegetation clearing associated with the proposed has the potential to disturb ornamental trees that may provide nesting habitat for special-status bird species and other migratory birds. With implementation of **Measure BIO-8**, presented below, potential impacts to special-status bird species and migratory birds during construction would be minimized and are considered less than significant.

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### Avoidance, Minimization and Mitigation Measures

The following measures shall be implemented during construction activities to avoid or minimize potential adverse impacts on special-status bird species and migratory birds.

**BIO-8** All vegetation clearing shall be restricted to outside the active breeding season (February 15 through August 15) for birds whenever possible. If vegetation clearing must occur during breeding season, a qualified biologist shall conduct clearance surveys for active bird nests immediately prior to any clearing of vegetation to ascertain whether any raptors or other migratory birds are actively nesting in the Biological Study Area (BSA). During the clearance surveys, the location of any active bird nests shall be mapped by the biologist, and an appropriate buffer where work shall not take place shall be established and monitored. The buffer shall be delineated by flagging, which shall remain in place until the nest is either abandoned or the young have fledged. If active nests are present, appropriate buffer area shall be determined on a case-by-case basis, depending on nesting species, subject to discussion with the resources agencies when nesting is discovered. This requirement shall be included in the PS&E for the project approved by UPRR.

***e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?***

***No Impact.*** The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, because there are no local policies or ordinances relevant to the project site.

### Avoidance, Minimization and Mitigation Measures

No mitigation is required.

***f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?***

***No Impact.*** The project site is not within the boundary of any approved habitat conservation plan (HCP) or natural community conservation plan (NCCP). Therefore, the proposed project would not conflict with any HCP or NCCP and no mitigation is required.

### Avoidance, Minimization and Mitigation Measures

No mitigation is required.

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### V. CULTURAL RESOURCES

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The term “cultural resources” as used in this section refers to all historical and archaeological resources, regardless of significance.

This section is based on the Draft *Historic Property Survey Report (HPSR)*, February, 2011, which includes the *Historical Resources Evaluation Report (HREER)*, February 2011, the *Archaeological Survey Report (ASR)*, February 2011, the *Extended Phase I Survey Report (XPI)*, and the *Environmentally Sensitive Area Action Plan (ESA)* February, 2011 prepared by LSA Associates, Inc. These reports are draft and will be finalized before approval of the IS/MND.

#### ***a and b) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?***

##### ***Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?***

***Less than Significant Impact.*** Based on the findings presented in the Draft HPSR, the proposed project will not cause a substantial adverse change in the significance of a historical resource or an archaeological resource pursuant to § 15064.5.

The results of the architectural survey, archaeological survey, and the extended phase one (XPI) survey conducted for the project indicate that there are five historic-period (45 years of age or older) built environment resources and 16 historical archaeological resources within the project APE that required evaluation. The built environment resources include an approximately 1.85-mile segment of the Southern Pacific Railroad (36-010330), an approximately 200-foot (ft) segment of the California Southern Railroad (36-006847), a former American Railway Express Company building, a former Southern Pacific passenger depot, and a historic period residential neighborhood (South Colton). Only a small portion of the potential historic district is located within the project Area of Potential Effect (APE). The portion within the project APE was intensively surveyed and the entire potential district was surveyed at the reconnaissance level.

There are 16 archaeological resources within the APE: one previously recorded railroad siding with concrete features (36-007976/CA-SBR-7976H); three historic refuse deposits (36-022637/CA-SBR-14410H, 36-022180/CA-SBR-14123H, and 36-022181/CA-SBR-14124H); two historic refuse deposits with structural remains at the former sites of historic buildings (36-022179/CA-SBR-14122H and 36-022182/CA-SBR-14125H); nine surface concrete features (36-022625/CA-SBR-14400H, 36-022626/CA-SBR-14401, 36-022627/CA-SBR-14402H, 36-022628/CA-SBR-14403H, 36-022629/CA-SBR-14404H, 36-022630/CA-SBR-14405H, 36-022632/CA-SBR-14407H, 36-022633/CA-SBR-14408H, and 36-022634/CA-SBR-14409H), and one brick feature (36-022631/CA-SBR-14406H).

The results of the cultural resource studies have determined that none of the built environment resources are eligible for the California Register of Historical Resources (California Register) and none qualify as historical resource under CEQA. Nine of the historical archaeological resources have been determined to not be eligible for the California Register, nor do they qualify as historical resources according to CEQA. For the purpose of this undertaking only, seven of the historical archaeological resources are considered historical resources for the purposes of CEQA and will be protected by the use of ESAs. The seven remaining historical archaeological sites- 36-

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022627, 36-022629, 36-022630, 36-022631, 36-022632, 36-022633 were not evaluated as part of the proposed project but will be considered historical resources for the purposes of CEQA for this project only. These resources are located within the APE, but can be protected in place through establishment of Environmentally Sensitive Areas (ESAs), and 36-022634 are located within the APE, but can be protected in place through establishment of Environmentally Sensitive Areas (ESAs). For the purpose of this project only, these seven historical archaeological resources are considered historical resources for the purposes of CEQA.

### **Project Impacts**

There are 21 cultural resources within the APE that required evaluation. As noted above, only seven are considered to be historical resources for the purposes of CEQA. The Draft HPSR presents a finding of no substantial adverse change – ESAs for the project, because the impacts to historical resources within the Project Area limits (APE) will be mitigated to below the level of significance by using the Secretary of the Interior’s Standards for the Treatment of Historic Properties With Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings (Standards) pursuant to CEQA Guidelines §15064.5(b). Establishment of Environmentally Sensitive Areas (ESA), enforcement measures and conditions that utilize the Standards are outlined in **Measure CUL-3** and in the ESA Action Plan attached to the Draft HPSR. Thus, potential impacts to these resources would be avoided and are considered mitigated to less than significant.

The portion of the APE located east of Colton Crossing, which constitutes the former Colton rail yard, is sensitive for historical archaeological resources associated with the long history of the railroad; it is possible that previously unknown buried historical archaeological resources will be discovered by the Build Alternative. In the event that previously unknown buried cultural materials are encountered during construction, compliance with **Measures CUL-1** and **CUL-2**, presented below will minimize potential impacts to unknown cultural resources and are considered less than significant. As noted above, **Measure CUL-3** will mitigate potential impacts to known historical resources within the APE.

### **Avoidance, Minimization and Mitigation Measures**

The following measures shall be implemented during construction activities to avoid, minimize and/or mitigate potential impacts on known and unknown cultural resources.

**CUL-1** An archaeological monitor shall be retained by UPRR and be present during ground disturbing activities within the top four feet of the surface within the APE at the Colton Crossing and eastward. The monitor shall meet the Secretary of Interior Professional Qualifications Standards for historical archaeology. The monitor shall have the authority to temporarily halt or divert construction activities to assess the significance of archaeological finds and consult with the appropriate agency staff. The agency staff and consultant archaeologist will determine the need for salvage excavation, laboratory analysis, curation of materials, and reporting requirements.

**CUL-2** If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

**CUL-3** An Environmentally Sensitive Area (ESA) will be established for the following seven archaeological sites: 36-022627, 36-022629, 36-022630, 36-022631, 36-022632, 36-

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022633, and 36-022634. The ESA will consist of an area within and near the limits of construction where access is prohibited or limited for the preservation of each archaeological site. The ESA boundary of each site includes the surface exposure of the site and potential subsurface deposits identified during the remote sensing program, and a buffer of 20 feet. No work shall be conducted within the ESA. All designated ESAs and fencing limits will be shown on final design plans and appropriate fencing requirements included in the PS&E. Fencing will consist of high visibility fencing material and will be 4 feet high. The archaeological monitor who meets the Secretary of Interior Professional Standards for historical archaeology shall monitor the placement of the ESA fencing, inspect the fencing periodically throughout the construction period, order replacement of fencing (if needed) and monitor removal of fencing at the end of construction (see ESA Action Plan in the HPSR, Attachment F).

### **c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

This section is based on the *Paleontological Resources Identification and Evaluation Report*, November 2010 prepared by LSA Associates, Inc.

**Less Than Significant Impact.** Geologic mapping shows that the project area is underlain by middle Pleistocene alluvium and young (Holocene) alluvium sediments derived from the Santa Ana River. The Pleistocene sediments consist of old aeolian (windborne) dune sands and old aeolian sand sheets. The Holocene deposits consist of young alluvial valley deposits and very young wash deposits. According to available records, near-surface late Pleistocene fossils have been found throughout this part of the western San Bernardino Basin.

Within the project area, Holocene alluvium (i.e., deposited in the last 9,000 years) is not considered to contain significant paleontological resources; however, underlying Pleistocene sediments may contain vertebrate fossils. Therefore, all areas of the project with Holocene sediments have the potential to be underlain by Pleistocene sediments that may contain fossils.

A literature review utilizing recent geologic mapping summaries, unpublished reports, paleontological assessment and monitoring reports, field notes, and published literature as appropriate was conducted for the project. In addition, a paleontological resource locality search was conducted through the San Bernardino County Museum, which responded that Pleistocene sediments in the project area are known to produce significant paleontological resources. The Los Angeles County Museum of Natural History was also consulted and added that “Nearby, however, are exposures of older Quaternary deposits, and these may underlie the surficial sediments in the proposed project area.” Both museums concluded that excavations into the older Quaternary alluvial deposits exposed in the project study area may well encounter vertebrate fossils, and substantial excavations in the sedimentary deposits in the proposed project area.

The County of San Bernardino maintains a Paleontological Resource Sensitivity Map (PRSM), which graphically presents the distribution of geologic formations underlying County land that have paleontological sensitivity. The degree of sensitivity is based on available scientific data where local sedimentary formations either have a record of producing fossils or have a realistic potential to contain paleontological resources.

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The PRSM mapping indicates the western portion of the project is considered to have high paleontological sensitivity at the surface and at depth, while the eastern portion has high sensitivity only at depth.

The project is expected to disturb sediments with a high potential to contain significant, non-renewable paleontological resources because the project is located in an area identified as having high paleontological sensitivity at the surface and at depth. While most excavation for the proposed project will generally be less than 10 feet below ground surface (bgs), the elevated bridge column footings will require drilling up to 72 inches diameter to a depth of 100 feet. The drilling has the potential to encounter Pleistocene sediments containing fossils.

In addition, stone columns for the bridge structure will be constructed by a vibro-replacement method, which utilizes a vibratory probe inserted into the ground that forces select backfill material into the soil and densifies the existing soil column around the probe. The resultant columns of strengthened, densified soil will increase soil bearing capacity, reduce total and differential settlement, and reduce liquefaction potential. This method of construction of the columns will not have soil spoil associated with it; therefore, any paleontological resources (fossils) would remain in situ. The construction of the columns would not have an adverse impact on paleontological resources.

With implementation of **Measure PAL-1** presented below, potential impacts to any paleontological resources encountered during construction would be minimized and are considered less than significant levels.

### **Avoidance, Minimization and/or Mitigation Measures**

The following measures are proposed to minimize impacts to paleontological resources that may be encountered during construction:

- PAL-1** A Paleontological Mitigation Plan (PMP) will be prepared by a qualified paleontologist prior to completion of final project design, and the recommendations incorporated into the PS&E approved by UPRR. The PMP will include, but not be limited to, the following:
- A trained paleontological monitor shall be present during ground-disturbing activities within undisturbed sediments determined likely to contain paleontological resources. The monitoring will be conducted on a half-time basis when excavation is occurring in the western portion of the site, the eastern portion of the site, and for bridge footings where excavation exceeds 10 feet in depth. If paleontological resources are encountered during excavation, the monitoring will increase to full-time.
  - The monitor will be empowered to temporarily halt or redirect construction activities to ensure avoidance of adverse impacts to paleontological resources. The monitor will be equipped to rapidly remove any large fossil specimens encountered during excavation.
  - If small fossil vertebrate remains are located during the monitoring program, standard samples (12 cubic meters/6,000 lbs) of sediment will be collected and processed to recover microvertebrate fossils. Processing will include wet screen washing and microscopic examination of the residual materials to identify small vertebrate remains.

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- Upon encountering a large deposit of bone, salvage of all bone in the area will be conducted with additional field staff and in accordance with modern paleontological techniques.
- All fossils will be prepared to a reasonable point of identification. Excess sediment or matrix will be removed from the specimens to reduce the bulk and cost of storage. Itemized catalogs of all material collected and identified will be provided to the museum repository along with the specimens.
- A report documenting the results of the monitoring and salvage activities and the significance of the fossils will be prepared and submitted to Caltrans and the project team within 60 days of the end of grading or excavation activities.
- All fossils collected during this work, along with the itemized inventory of these specimens, will be offered to the San Bernardino County Museum or other appropriate museum repository for permanent curation and storage.

### ***d) Disturb any human remains, including those interred outside of formal cemeteries?***

***Less Than Significant Impact.*** The California Health and Safety Code (Section 7050.5) states that if human remains are discovered on site, no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98, including coordination with local Native American Indians, if the remains are prehistoric. With adherence to state regulations and **Measure CUL-4** presented below, potential impacts to unknown human remains are considered less than significant.

### **Avoidance, Minimization and/or Mitigation Measures**

The following measures shall be implemented during construction activities to avoid or minimize potential adverse impacts on unknown human remains.

**CUL-4** If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact UPRR and Caltrans District 8 Native American Coordinator so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable. This provision shall be included in the contract specifications approved by UPRR.

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## VI. GEOLOGY AND SOILS

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This section is based on the *Geotechnical Investigation for the Proposed Colton Crossing Project*, August 20, 2010, prepared by CHJ Incorporated, *The Draft Initial Site Assessment (ISA) Includes ISA Checklist and Phase 1 Environmental Site Assessment*, August 31, 2010, prepared by CHJ Incorporated, and the *Draft Preliminary Site Investigation (PSI) Representative Sampling*, September 2010, prepared by CHJ Incorporated.

a) **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**

(i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidences of known fault? (Refer to Division of Mines and Geological Special Publication 42.)**

**Less Than Significant Impact.** The most dominant geologic feature of the region is the San Andreas Fault Zone, which is a State-designated Alquist-Priolo Earthquake Fault Zone that traverses most of California in a northwest-southeast direction. This regional fault is located approximately 8 miles northeast of the project site and is expected to produce an MCE 8.0 earthquake sometime within the next 50 years.

The San Jacinto Fault, another designated Alquist-Priolo Earthquake Fault Zone, is adjacent to the northeast corner of the project site (approximately 125 feet northeast of Station 85), and another splay of the San Jacinto Fault is located approximately 0.9 mile northeast of the project site. This fault is expected to produce an MCE 7.5 earthquake sometime within the next 50 years.

The Rialto-Colton Fault crosses the center of the project site in a northwest-southeast direction; it is classified as a concealed fault and may be associated with the San Jacinto Fault. It is believed to extend northwest and eventually connect to the Day Canyon Fault along the San Gabriel Mountains. The Rincon-Colton Fault could be considered “active” based on the Department criteria of movement within the last 700,000 years before present. According to state mapping and database info, this fault could produce an MCE 6.75 earthquake sometime within the next 50 years.

The project geotechnical investigation determined that the potential for rupture on this fault is “very low”. The investigation found several other faults in the surrounding region, but none of them was considered capable of surface rupture, was mapped as crossing the site, or projected toward the site.

The project geotechnical investigation recommended a number of special precautions or restrictions would need to be included in project design to ensure that the project is not adversely affected by fault-induced ground rupture. At a minimum, the project would need to be built to current applicable American Railway Engineering and Maintenance-of-Way Association (AREMA), UPRR and State seismic standards.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

ii) **Strong seismic ground shaking?**

**Less Than Significant Impact.** The Rincon-Colton Fault could be considered “active” based on the Department criteria of movement within the last 700,000 years before present. According to state mapping and database info, this fault could produce an MCE 6.75 earthquake sometime within the next 50 years. The horizontal PBA for the general project area was estimated to be

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approximately 0.6g from Caltrans California Seismic Hazards Map (Caltrans 1996); however, site-specific calculations in the project geotechnical investigation concluded the most appropriate design peak ground acceleration for the project site is 0.5g based on available data and conditions.

Faults in the project area have been documented as producing earthquakes with a magnitude greater than moment magnitude ( $M_w$ ) of 7.8, and a PGA of 0.6g was estimated following the 2009 Caltrans seismic design procedure. Depending on soil condition and location within the site, the computed ground motion in the site specific area could reach 0.5g.

With implementation of **Measures GEO-1 and GEO-2** presented below, potential project-related permanent impacts related to seismic ground shaking are considered less than significant.

### **Avoidance, Minimization and/or Mitigation Measures**

The following measures shall be implemented during construction activities and project implementation to avoid or minimize potential adverse impacts from earthquakes.

**GEO-1** During the Plans, Specifications, and Estimates (PS&E) Phase, the design and construction of the project structures shall comply with the recommendations in the Preliminary Geotechnical Investigation (pages 30–51) prepared for the project (CHJ 2010) and shall be consistent with appropriate UPRR and American Railway Engineering and Maintenance-of-Way Association (AREMA) standards. Additional detailed geotechnical investigations may be conducted by qualified geotechnical personnel as needed to assess geotechnical conditions at specific locations within the project area for the purposes of more specific foundation or construction design. Additional construction requirements or refinements may be incorporated into the final project design as appropriate.

**GEO-2** All of the following requirements shall be included in the final design for the project and so noted on appropriate plans:

- Structures shall be designed to resist the maximum credible earthquake associated with nearby faults.
- Design and construction of the project in accordance with current Federal, State, AREMA, and UPRR standards as applicable, and the California Building Code.

### ***iii) Seismic-related ground failure, including liquefaction?***

***Less Than Significant Impact.*** The project site is located in the Riverside Hydrologic Subarea of the Santa Ana Drainage Province. The regional groundwater flow direction in the vicinity of the site is to the south-southeast, toward the Santa Ana River just east of the site. Based on borings performed as part of the geotechnical investigation and site assessment reports, groundwater levels in the project area are relatively deep (i.e., greater than 50 feet bgs, on the order of 117–123 feet bgs). However, the reports also found historical high groundwater depths on the eastern portion of the site (near Mount Vernon Avenue, on the order of 20–25 feet). During a major seismic event, the potential for liquefaction within the western and central portions of the project site is considered low, while the potential for liquefaction in the eastern portion of the site is considered moderate.

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Since the site does have some potential for seismically induced liquefaction, the geotechnical investigation included a number of engineering parameters to address liquefaction during design. With implementation of **Measures GEO-1** and **GEO-2**, above, the potential for significant liquefaction effects on the structures constructed for the proposed project are less than significant levels.

### **Avoidance, Minimization and Mitigation Measures**

Implemented of **Measures GEO-1** and **GEO-2** during construction activities and project implementation will avoid or minimize potential adverse impacts from seismic-related ground failure, including liquefaction.

#### **iv) Landslides?**

**Less Than Significant Impact.** In areas of steep natural slopes or steep rock cuts combined with adverse joint patterns in fractured rock materials, seismically induced rock falls are a possibility. Since the site is essentially flat with no adjacent uplands, the site has little or no potential for rock falls. With the currently proposed slope gradients, potential for rock falls is considered low for properly engineered and constructed slopes; therefore, the proposed project would not be adversely affected by instability associated with natural slopes, and impacts in this regard are considered to be less than significant.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

#### **b) Result in substantial soil erosion or the loss of topsoil?**

**Less Than Significant Impact.** Because the native soils in the project area are predominantly sandy with relatively minor amounts of clay, there is the potential for moderate to severe erosion on natural or new (manmade) slopes. Any slopes would be particularly prone to erosion from runoff from new pavement areas, especially during heavy rains; therefore, operation of the proposed project could result in adverse water quality impacts related to erosion, which are evaluated in Section IX.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

#### **c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse?**

**Less Than Significant Impact.** Strong ground shaking can cause settlement by allowing sediment particles to become more tightly packed, thereby reducing pore space, and causing substantial levels of seismically induced settlement, lateral spreading, or subsidence. The potential for liquefaction is anticipated to be low in the central and western portions of the project site, and moderate in the eastern portion of the site as described in Section iii, above.

When a load such as fill soils is placed, the underlying soil layers undergo a certain amount of compression due to the deformation and relocation of soil particles and the expulsion of water or

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air from the void spaces between the grains. Some settlement occurs immediately after a load is applied, and some additional settlement occurs over time after placement of the load. For engineering applications, it is important to estimate the total amount of settlement that will occur following placement of a given load and the rate of compression (consolidation). Because the subsurface soils on the project area are predominantly granular, the soils are not expected to undergo consolidation settlement (settlement over long periods of time). Therefore, the proposed project would not be adversely affected by compressible soils.

Corrosive soils contain constituents or physical characteristics that react with concrete (water-soluble sulfates) or ferrous metals (chlorides, low percentage of hydrogen levels, and low electrical resistivity). Fine-grained soils (predominantly clays) are the typical soil types responsible for corrosive site conditions. Because the native subsurface soils in the project area are composed predominantly of coarse-grained soils (medium sands with gravel and dense sands) with little clay binder, corrosive soil is not expected and the construction of the proposed project would not be adversely affected by corrosive soils.

With implementation of **Measures GEO-1** and **GEO-2** (page 58), the potential for various kinds of unstable soils or seismically induced secondary impacts on the structures constructed for the proposed project are considered less than significant.

### **Avoidance, Minimization and Mitigation Measures**

Implemented of **Measures GEO-1** and **GEO-2** during construction activities and project implementation will avoid or minimize potential adverse impact potential for various kinds of unstable soils or seismically induced secondary impacts.

#### **d) *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?***

**No Impact.** Untreated expansive soils underlying a foundation slab or road alignment can cause damage, including heaving, tilting, and cracking. The soils on the project site are predominantly sands, with varying amounts of silt and gravel. The clay content of these soils is not substantial; therefore, the on-site soils are anticipated to be non-expansive or have a very low expansion potential.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

#### **e) *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?***

**No Impact.** The project does not propose any uses or improvements that would require septic tanks or alternative wastewater disposal systems.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

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### VII. GREENHOUSE GAS EMISSIONS

a) **Generate greenhouse gas emission, either directly or indirectly, that may have a significant impact on the environment?**

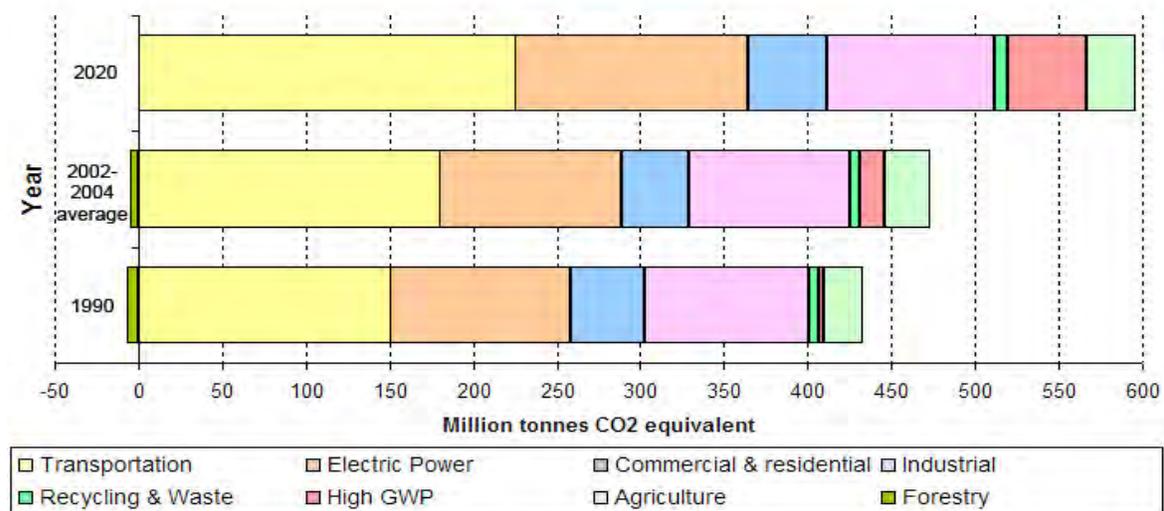
and

b) **Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing greenhouse gases?**

**Less Than Significant Impact.** According to Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate change in CEQA Documents (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined whether a project’s incremental effect is “cumulatively considerable.” See CEQA Guidelines Sections 15064(i)(1) and 15130. To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

As part of its supporting documentation for the Draft Scoping Plan, ARB recently released an updated version of the GHG inventory for California (June 26, 2008). Figure 3.7-1, from that update, shows the total GHG emissions for California for 1990, 2002–2004 average, and 2020 projected if no action is taken.

**Figure 3.7-1: California GHG Inventory Forecast**



Source: <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>

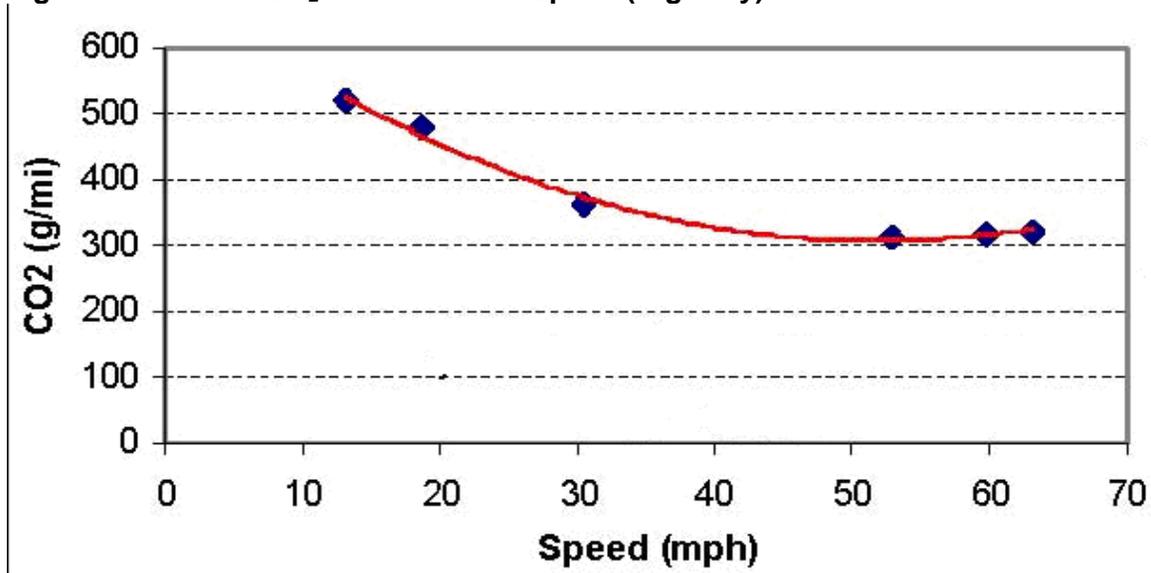
Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98

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percent of California’s GHG emissions are from the burning of fossil fuels and 40 percent of all humanmade GHG emissions are from transportation (see Climate Action Program at Caltrans [December 2006]), the Department has created and is implementing the Climate Action Program that was published in December 2006.<sup>7</sup>

One of the main strategies in the Caltrans Climate Action Program to reduce GHG emissions is to make California’s transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0–25 miles per hour [mph]) and speeds over 55 mph; the most severe emissions occur from 0–25 mph (see Figure 3.7-2 below). Relieving congestion by enhancing operations and improving travel times in high congestion travel corridors will lead to an overall reduction in GHG emissions. The purpose of the proposed project is to improve rail efficiency and reduce vehicle delays. As shown in Section III, implementation of the proposed project would reduce the long-term CO<sub>2</sub> emissions from on-road vehicle and rail operations.

**Figure 3.7-2: Fleet CO<sub>2</sub> Emissions vs. Speed (Highway)**



Source: Center for Clean Air Policy— [http://www.ccap.org/Presentations/Winkelman%20TRB%202004%20\(1-13-04\).pdf](http://www.ccap.org/Presentations/Winkelman%20TRB%202004%20(1-13-04).pdf)

**AB 32 Compliance.** The Department continues to be actively involved on the Governor’s Climate Action Team as ARB works to implement the Governor’s Executive Orders and help achieve the targets set forth in Assembly Bill 32 (AB 32). Many of the strategies the Department is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Governor Arnold Schwarzenegger’s Strategic Growth Plan calls for a \$238.6 billion infrastructure improvement program to fortify the state’s transportation system, education, housing, and waterways, including \$100.7 billion in transportation funding through 2016.<sup>8</sup> As shown in the figure below, the Strategic Growth Plan targets a significant decrease in traffic congestion below today’s level and a corresponding reduction in GHG

<sup>7</sup> <http://www.dot.ca.gov/docs/ClimateReport.pdf>.

<sup>8</sup> Governor’s Strategic Growth Plan, Figure (<http://gov.ca.gov/pdf/gov/CSGP.pdf>).

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emissions. The Strategic Growth Plan proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that, combined together, yield the promised reduction in congestion. The Strategic Growth Plan (refer to Figure 3.7-3) relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

As part of the Climate Action Program at Caltrans<sup>9</sup> (December 2006), the Department is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, and developing transit-oriented communities and high-density housing along transit corridors. the Department is working closely with local jurisdictions on planning activities; however, the Department does not have local land use planning authority. the Department is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars and light and heavy-duty trucks; the Department is doing this by supporting ongoing research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by the EPA and ARB. Lastly, the use of alternative fuels is also being considered; the Department is participating in funding for alternative fuel research at UC Davis.

**Figure 3.7-3: Outcome of Strategic Growth Plan**

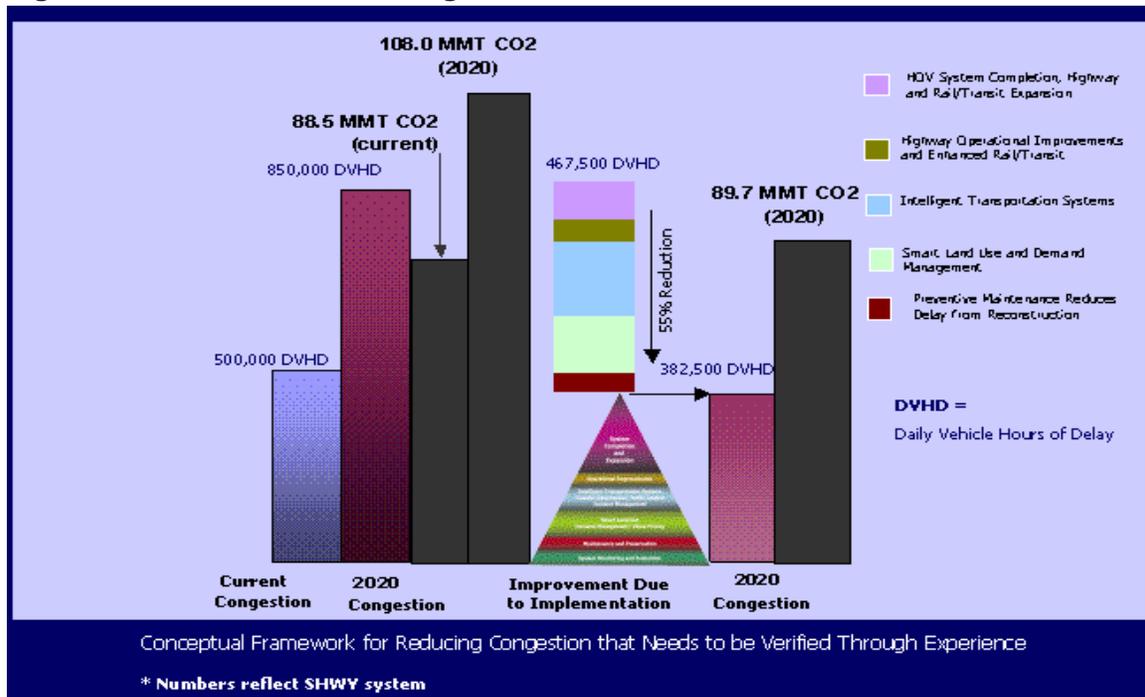


Table 3.7.A summarizes Caltrans and statewide efforts that the Department is implementing in order to reduce GHG emissions. For more detailed information about each strategy, please see Climate Action Program at Caltrans (December 2006); it is available at <http://www.dot.ca.gov/docs/ClimateReport.pdf>.

<sup>9</sup> <http://www.dot.ca.gov/docs/ClimateReport.pdf>.

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**Table 3.7.A: Climate Change Strategies**

| Strategy  | Program  | Partnership                          |  | Method/Process  | Estimated CO <sub>2</sub> Savings (MMT) |                          |
|---|--|--------------------------------------|--|---|---|--------------------------|
|   |  | Lead                                 | Agency   |   | 2010                                    | 2020                     |
| Smart Land Use  | Intergovernmental Review (IGR)   | Caltrans                             | Local governments                                | Review and seek to mitigate development proposals                             | Not Estimated                           | Not Estimated            |
|   | Planning Grants  | Caltrans                             | Local and regional agencies & other stakeholders | Competitive selection process   | Not Estimated                           | Not Estimated            |
|   | Regional Plans and Blueprint Planning                                    | Regional Agencies                    | Caltrans   | Regional plans and application process  | 0.975                                   | 7.8                      |
| Operational Improvements & Intelligent Trans. System (ITS) Deployment | Strategic Growth Plan  | Caltrans                             | Regions  | State ITS; Congestion Management Plan   | 0.007                                   | 2.17                     |
| Mainstream Energy & GHG into Plans and Projects                       | Office of Policy Analysis & Research; Division of Environmental Analysis | Interdepartmental effort             |  | Policy establishment, guidelines, technical assistance                        | Not Estimated                           | Not Estimated            |
| Educational & Information Program                                     | Office of Policy Analysis & Research                                     | Interdepartmental, CalEPA, CARB, CEC |  | Analytical report, data collection, publication, workshops, outreach          | Not Estimated                           | Not Estimated            |
| Fleet Greening & Fuel Diversification                                 | Division of Equipment  | Department of General Services       |  | Fleet Replacement<br>B20<br>B100  | 0.0045                                  | 0.0065<br>0.45<br>0.0225 |
| Non-vehicular Conservation Measures                                   | Energy Conservation Program  | Green Action Team                    |  | Energy Conservation Opportunities   | 0.117                                   | 0.34                     |
| Portland Cement   | Office of Rigid Pavement   | Cement and Construction Industries   |  | 2.5% limestone cement mix<br>25% fly ash cement mix<br>> 50% fly ash/slag mix | 1.2<br>0.36                             | 3.6                      |
| Goods Movement  | Office of Goods Movement   | CalEPA, CARB, BT&H, MPOs             |  | Goods Movement Action Plan  | Not Estimated                           | Not Estimated            |
| <b>Total</b>  |  |                                      |  |   | <b>2.72</b>                             | <b>18.67</b>             |

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**Adaptation Strategies.** “Adaptation strategies” refer to how the Department and others can plan for the effects of climate change on the State’s transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damaging roadbeds by longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

Climate change adaptation must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, Governor Schwarzenegger signed Executive Order S-13-08, which directed a number of State agencies to address California’s vulnerability to sea level rise caused by climate change.

The California Resources Agency (now the Natural Resources Agency, [Resources Agency]), through the interagency Climate Action Team, was directed to coordinate with local, regional, State and federal public and private entities to develop a State Climate Adaptation Strategy. The Climate Adaptation Strategy will summarize the best known science on climate change impacts to California, assess California’s vulnerability to the identified impacts, and then outline solutions that can be implemented within and across State agencies to promote resiliency.

As part of its development of the Climate Adaptation Strategy, Resources Agency was directed to request the National Academy of Science to prepare a Sea Level Rise Assessment Report by December 2010 to advise how California should plan for future sea level rise. The report is to include:

- Relative sea level rise projections for California, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates;
- The range of uncertainty in selected sea level rise projections;
- A synthesis of existing information on projected sea level rise impacts to State infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems; and
- A discussion of future research needs regarding sea level rise for California.

Furthermore, Executive Order S-13-08 directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level affecting safety, maintenance and operational improvements of the system and economy of the State. the Department continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Prior to the release of the final Sea Level Rise Assessment Report, all State agencies that are planning to construct projects in areas vulnerable to future sea level rise were directed to consider a range of sea level rise scenarios for the years 2050 and 2100 in order to assess project

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vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. However, all projects that have filed a Notice of Preparation, and/or are programmed for construction funding the next five years (through 2013), or are routine maintenance projects as of the date of Executive Order S-13-08 may, but are not required to, consider these planning guidelines. Sea level rise estimates should also be used in conjunction with information regarding local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data. (Executive Order S-13-08 allows some exceptions to this planning requirement.) As the proposed project is schedule for construction funding prior to 2013 it is not required to consider sea level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. the Department is an active participant in the efforts being conducted as part of Governor's Schwarzenegger's Executive Order on Sea Level Rise and is mobilizing to be able to respond to the National Academy of Science report on Sea Level Rise Assessment, which is due to be released by December 2010.

On August 3, 2009, the Natural Resources Agency in cooperation and partnership with multiple state agencies, released the 2009 California Climate Adaptation Strategy Discussion Draft, which summarizes the best known science on climate change impacts in seven specific sectors and provides recommendations on how to manage against those threats. The release of the draft document set in motion a 45-day public comment period. Led by the California Natural Resources Agency, numerous other State agencies were involved in the creation of discussion draft, including Environmental Protection; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The discussion draft focuses on sectors that include Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. The strategy is in direct response to Gov. Schwarzenegger's November 2008 Executive Order S-13-08 that specifically asked the Natural Resources Agency to identify how State agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. As data continues to be developed and collected, the State's adaptation strategy will be updated to reflect current findings.

Currently, the Department is working to assess which transportation facilities are at greatest risk from climate change effects; however, without statewide planning scenarios for relative sea level rise and other climate change impacts, the Department has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios are available, the Department will be able review its current design standards to determine what changes, if any, may be warranted in order to protect the transportation system from sea level rise.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

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### VIII. HAZARDS AND HAZARDOUS MATERIAL

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The following is a summary of the findings, conclusions, and recommendations *The Draft Initial Site Assessment (ISA) Includes ISA Checklist and Phase 1 Environmental Site Assessment*, August 31, 2010, prepared by CHJ Incorporated (CHJ 2010a), and the *Draft Preliminary Site Investigation (PSI) Representative Sampling*, September 2010, prepared by CHJ Incorporated (CHJ 2010b).

**a) Create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials?**

**Less Than Significant Impact.** No storage or disposal has been identified at the site and no off-site sources considered likely to affect the site were identified. Based on these findings, no significant concerns related to hazardous materials use, storage, or disposal have been identified at the subject property.

**Presence of Hazardous Substances.** The project improvement plans indicate that construction will occur in areas identified as containing Recognized Environmental Conditions (RECs) or areas contaminated by various hazardous materials from historical rail-related activities. According to the Phase 1 ESA report, “Soil stockpile adjacent to the south of the main line tracks in the East Colton Yard area ... is from fuel bunker excavations and is likely to be contaminated. Subsurface unidentified organic material in the northeast quadrant of the (site) ... may be contaminated and may have impacted the underlying soils. ... The potential for surficial soil contamination due to the general use of the project area as a rail yard represents an REC. ... Although the contamination has not been fully delineated, the fuel bunker area is considered to have a very low potential to significantly impact the soils north of the track” (CHJ 2010a). Organic materials were found in a small area located just south of the I-10 freeway, just north of the railroad tracks, and just east of S. 6th Street. No other evidence of hazardous substances was observed within or adjacent to the project right-of-way.

Routine maintenance activities during operation of the proposed project would be required to follow applicable regulations with respect to the use, storage, handling, transport, and disposal of potentially hazardous materials. Therefore, the operation of the proposed project will not result in adverse impacts related to hazardous waste or materials.

**Underground and Aboveground Storage Tanks.** No leaking underground storage tanks (LUST) or aboveground storage tanks (ASTs) were identified in the ISA adjacent to the project site or adjacent areas. In the surrounding area, the identified LUST case at 125 N. 9th Street represents a historical REC, but the documented soil contamination was remediated and is not considered to have a potential to impact the project. The identified LUST case adjacent to the south of the main line tracks in the west portion of the Southern Pacific East Colton Yard also represents an REC; however, the residual soil contamination has been delineated and is considered to have a very low potential to affect the project. The four LUST cases north of I-10 in the project vicinity are well documented and are not considered to represent a potential to affect the project site; therefore, these LUST sites are not identified as RECs in the Phase 1 report.

No LUST or ASTs were identified in or near the project area that would negatively affect construction of the proposed improvements. Therefore, no environmental impact to the proposed project would occur from LUST or AST sites (CHJ 2010b).

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**Asbestos-Containing Materials.** Testing was conducted for asbestos-containing materials (ACMs) on the structures proposed to be demolished as part of the project. ACMs were found to exist in the old buildings to be demolished at 125 N. 9th Street on the former Cal-Wal Gypsum Supply site just south of the I-10 freeway between La Cadena Drive and 9th Street. These materials will need to be removed and disposed of in accordance with applicable regulations at the beginning of construction. With implementation, of **Measures HAZ-1 and HAZ-2** (page 69), potential impacts associated ACMs with will be minimized and are less than significant.

**Hazardous Waste Disposal.** No indication of on-site disposal was noted during the reconnaissance survey, and no evidence of onsite disposal was noted at any of the off-site facilities that handle or store hazardous wastes. However, it should be noted that an “undefined area of unidentified organic material” was reported by UPRR personnel in the northeast portion of the site (located just southeast of the I-10 freeway and S. 6th Street) that represents an REC and may require additional evaluation if it will be affected by construction activities. With implementation, of **Measure HAZ-3** (page 69), potential impacts associated with hazardous waste disposal will be minimized and are less than significant.

**Drainage Channels.** Two drainage channels cross the project site, the SD-8 and SD-9 system in the western portion of the site, and the 11th Street Drain (SD-10) in the eastern portion of the site). Based on site history, soils within the site are suspected of being contaminated due to their proximity to the rail yard and possible mishandling and/or disposal of wastes or materials. Based on UPRR personnel interviews, disposal of hazardous materials has reportedly not occurred on site during the last 10 years; however, previous site history specific to that area is unknown. UPRR personnel reported that no specific hazmat investigations have been conducted within the project site. A sampling scope for this area was developed, authorized, and implemented concurrently with the Phase I process. The analytical results indicated slightly elevated hydrocarbon and heavy metal detections. While the specific detections were not high, the elevated hydrocarbons and metals may be indicative of disposal of contaminated soil or other hazardous materials over time. With implementation, of **Measures HAZ-1 and HAZ-5** (pages 69-70), potential impacts associated with contaminated surface water and/or soil will be minimized and are less than significant.

**Lead-Based Paint and Heavy Metals.** Due to the age of the structures on the former Cal-Wal Gypsum Supply site, lead-based paint (LBP) contamination was found in the buildings to be demolished at 125 N. 9th Street. These materials will need to be removed and disposed of in accordance with applicable regulations at the beginning of construction.

No other potential LBP was observed during site reconnaissance surveys, however, it is possible that elevated lead concentrations may be found in older buildings or structures affected by project construction, or be present within the striping paint associated with the onsite and adjacent roadways. With implementation, of **Measure HAZ-4** (page 69) potential impacts associated with lead-based paint will be minimized and are less than significant.

**Weed Control.** Railroad operations have historically been known to use various substances for weed control within the railroad right-of-way. The ISA and Phase 1 ESA determined that surface soils within the project area may contain hazardous materials from the use of weed control, including herbicides, arsenic, and lead. The proposed grade-separated overpass structure will span over the existing BNSF tracks, and proposed improvement plans also show related construction activities adjacent to the UPRR tracks. Sampling and analysis for herbicides, arsenic, and lead should be conducted. Any soil removal from the project site should be performed and soils

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remediated or disposed of according to existing regulations. With implementation, of **Measure HAZ-2** indicated below, potential impacts associated with weed control will be minimized and are less than significant.

**Aerially Deposited Lead (ADL).** Lead is generally encountered in unpaved areas (or formerly unpaved areas) adjoining older roads primarily as a result of deposition from historical vehicle emissions. A preliminary survey for lead deposition was conducted on site, and detected levels were within or below the published regulatory screening levels for exposure in children. No specific areas were identified that warranted further investigation; therefore, no special handling of material during construction due to lead levels was recommended.

### **Avoidance, Minimization and/or Mitigation Measures**

The following measures are proposed to avoid and/or minimize potential impacts related to hazardous materials:

**HAZ-1** During grading, soil excavation shall be monitored by the construction contractor for visible soil staining, odor, and the possible presence of unknown hazardous material sources, such as buried 55-gallon drums and underground tanks. If discolored soils, soils with an unusual odor, or undocumented subsurface structures are encountered during grading, work shall be halted in that area and a qualified environmental professional shall evaluate the situation and recommend the most appropriate course of action (e.g., sampling, remediation, etc).. Depending on the type and extent of contaminated materials found onsite, the environmental professional may recommend entering into a Voluntary Cleanup Agreement (VCA) with the California Department of Toxic Substances Control (DTSC) to oversee remediation of the contamination, as appropriate. This requirement shall be included in the contract specifications approved by UPRR.

**HAZ-2** The prime contractor shall ensure that any soils that shall be disturbed on or adjacent to the project site, and that are suspected of being contaminated by hazardous materials, shall be appropriately tested and/or remediated prior to the start of construction. If contamination is suspected or identified prior to construction activities, an environmental professional shall determine the most appropriate course of action required. This requirement shall be included in the contract specifications approved by UPRR.

**HAZ-3** Prior to the start of grading in the general area where “unidentified organic material” was found north of the railroad tracks just southeast of the I-10 freeway and S. 6th Street, soil sampling and testing for hydrocarbons and metals shall be conducted. Backhoe trenching may be needed to fully evaluate the lateral and vertical extent of the material. Any soil found to be contaminated in excess of applicable health standards shall be remediated and disposed of according to applicable regulations. This requirement shall be included in the contract specifications approved by UPRR.

**HAZ-4** A licensed contractor shall be retained to properly document, inspect, monitor, and remediate the identified asbestos-containing materials, lead-based paint, and miscellaneous universal wastes, as described in the Preliminary Site Investigation report, dated August 7, 2010. If asbestos-containing materials or lead-based paint are found, they shall be removed and properly disposed of prior to demolition or renovation, in accordance with rules and regulations of the South Coast Air Quality

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Management Control District and California Department of Toxic Substances Control. This requirement shall be included in the contract specifications approved by UPRR.

**HAZ-5** If dewatering is required during grading or construction, the onsite water shall be tested to assure it does not exceed any established health standards for heavy metals, organic materials, or other contaminants. Water removed from construction areas that is contaminated shall be disposed of by a licensed contractor in an approved landfill according to applicable regulations. This requirement shall be included in the contract specifications approved by UPRR.

***b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?***

***Less Than Significant Impact.*** If a train carrying hazardous materials were to derail while traveling on the flyover, there would be a slight increase in the risk of upset compared to the present at-grade travel. This is due to the increased height that the engine(s) or rail cars could fall and would have an increased risk of spilling their load(s). However, the flyover would also decrease the current potential for conflicts between trains at the existing at-grade crossing. An at-grade train accident involving the release of hazardous materials presents approximately the same relative risk to human health and safety as an accident involving the flyover. In addition, freight trains would be on the flyover for a very limited amount of time compared to their overall length of travel, so the increase in relative risk from accidents along the elevated track is negligible. Therefore, the overall change in risk of upset involving hazardous materials would only be incrementally increased and is not considered to be significant. The railroads will address the flyover when updating their emergency response plans, and it is not expected that the flyover will significantly change response times for police and fire personnel and equipment from existing conditions if a train accident were to occur in the project area. Therefore, the proposed project will have less than significant impacts relative to hazardous materials.

Typical hazardous materials used during construction (e.g., solvents, paints, and fuels) would be handled in accordance with standard procedures. There are standard regulations and the Department policies (avoidance and minimization measures) that must be followed with respect to the use, storage, handling, disposal, and transport of potentially hazardous materials during construction of the proposed project to protect human health and the environment. With implementation of **Measures HAZ-1** through **HAZ-5** (pages 69 and 70), potential hazardous materials impacts during construction are considered less than significant.

### **Avoidance, Minimization and Mitigation Measures**

**Measures HAZ-1** through **HAZ-5** will be implemented to avoid and/or minimize potential impacts related to hazardous materials during construction.

***c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?***

***Less Than Significant Impact.*** There are no school facilities existing or planned within a quarter mile of the project study area, so none of the impacts associated with proposed project, affect existing or planned school facilities. There are several public and private schools within a

## Chapter 3 – CEQA CHECKLIST REPONSES

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quarter mile of the northern railroad track (i.e., more than a quarter mile north of the Colton Rail Yard), and the project will reduce delay along this line which will incrementally improve or reduce the amount of engine emissions and risk of upset for trains along this line, so the project will have less than significant impacts in this regard.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**d) *Be located on site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?***

**No Impact.** According to the Envirostor database maintained by the State Department of Toxic Substances Control (DTSC), the project site is not included on the GCS 65962.5 “Cortese” list of hazardous material sites, so there is no impact in this regard (DTSC website 2010).

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?***

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**No Impact.** The project site is not located within an airport land use plan or within two miles of a public airport or public use airport, so there would be no safety hazards in this regard. The closest airport is the San Bernardino International Airport located 2.7 miles to the northeast.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**f) *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?***

**No Impact.** The project site is not located within two miles of a private airstrip, so there would be no safety hazards in this regard.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

***g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?***

**Less Than Significant Impact.** Response time is the period of time between when a call is received by a dispatcher and the arrival of a fire protection unit or a police patrol car. The response time varies depending upon the nature of the call. Typical calls are prioritized based upon the urgency of the incident. The average emergency call response time for a fire or police unit that includes the subject project site is less than five minutes. Other response times will vary depending on the level of priority in conjunction with the availability of a fire or police unit.

**Fire Protection.** Fire protection services for the project area are provided by the City of Colton Fire Department (CFD) with “mutual aid” services readily available from the San Bernardino County Fire Department. The CFD is responsible for providing fire suppression, emergency medical services, technical rescue, fire prevention, weed abatement, and disaster preparedness services to the City of Colton. These services are provided by four (4) fire stations strategically located throughout the City, which results in average response times of less than six minutes. Fire services are managed through the following three divisions: Operations, Fire Safety, and Disaster Preparedness. The closest CFD fire station to the project site is Fire Station 211 located at 303 East E Street, which is approximately 0.34 mile northeast of the project site (LSA 2010)(CFD 2010).

**Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**Police Protection.** Police protection services to the project area are provided by the City of Colton Police Department (CPD), which receives all calls at the main station located at 650 North La Cadena Drive approximately 0.45 mile north of the project area. The CPD also has a mutual aid agreement with all adjacent cities as a primary resource, and with the County of San Bernardino Sheriff-Coroner Department as a secondary resource. The mission of the CPD is to protect life and property, solve neighborhood problems, and enhance the quality of life in the community.

**Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**Other Protective Services.** The California Highway Patrol (CHP) has jurisdiction on freeways in California, including I-10. The nearest CHP office to the project site is located at 2211 Western Avenue in San Bernardino, approximately 35 miles northeast of the project area. This facility is the west San Bernardino Valley office that serves the Cities of Colton, Fontana, Rialto, San Bernardino, Loma Linda, and the unincorporated communities of Bloomington and Crestmore.

Other law enforcement in the project area includes the UPRR police force. UPRR police officers are commissioned in the states in which the UPRR has right-of-way. Officers also carry federal commissions issued by the USDOT, enabling UPRR officers to conduct intrastate law enforcement operations. The UPRR Police Department is certified by the California Commission on Peace Officers Standards and Training, and officers meet the same standards as any other sworn peace officer. The UPRR Police also respond to reports of hazardous materials accidents along its right-of-way, as well as railroad crossing and personal injury accidents. UPRR Police

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officers, working with UPRR Hazardous Materials Specialists, assist local agencies during railway spills and accidents, providing critical liaison between the railroad, shipping company and local police and fire departments. This group has almost immediate response times to any accidents or activity requiring their services on the project site.

### **Project Impacts**

During construction, incremental delay in the delivery of services may occur on local roadways, including slightly longer fire and police response times. No detours are anticipated for this project except for temporary closures necessary for the construction staging. Temporary reductions or closures may occur when barriers are being moved into position, when lanes are being restriped, when falsework is being installed or removed, or when the rail lines are being restored to their completed conditions. These temporary closures would likely be limited to non-peak travel hours, and would not adversely affect accessibility to residential or commercial land uses. The City of Colton and San Bernardino County Fire and Police/Sheriff Departments would be notified of all temporary road closures during the all phases of the construction.

A construction staging plan and Transportation Management Plan (TMP) would need to be prepared for the proposed project to minimize traffic-related impacts during construction (see Transportation Section XVI).

Implementation of the proposed project would incrementally improve overall circulation (and emergency access) within the project area by eliminating conflicts and delays at off-site at-grade crossings to the north, east, and west of the project area, although the actual benefit to local circulation would be incremental and difficult to accurately calculate, especially as distance from the project site increases. Once operational, no reduction in the number of travel lanes or intersecting road closures are planned as a result of the proposed project, so its impacts relative to emergency access will be less than significant.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

#### ***h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires including where wildlands are adjacent to urbanized areas or where residents are intermixed with wildlands?***

**No Impact.** The project site is in a heavily urbanized area with no urban/wildland interface on the project site or in the surrounding area.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

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### IX. HYDROLOGY AND WATER QUALITY

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The potential for the proposed project to result in adverse impacts related to hydrology and water quality was assessed in the *Water Quality Assessment Report* (WQAR) (February 2011), the *Summary of Floodplain Encroachment* (October 2010), and the *Preliminary Drainage Report* (August 2010). The discussion below is based on that analysis.

#### **a) Violate any water quality standards or waste discharge requirements?**

**Less Than Significant Impact.** Pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. In addition, during storm events erosion and sedimentation could occur at an accelerated rate. During construction of the proposed project, the total disturbed area would be approximately 36 acres. In addition, chemicals, liquid products, and petroleum products (such as paints, solvents, and fuels), concrete-related waste, and other construction debris and waste may be spilled or leaked, and have the potential to be discharged into receiving waters.

Pollutants of concern in runoff from the railroad mainline include sediments, heavy metals, oil and grease, trash and debris, pesticides, and organic compounds. The proposed project would result in a permanent increase in impervious surface area of approximately 9.2 acre compared to the existing railroad mainline. This increase in impervious area would increase the volume of runoff during storms, which would more effectively transport pollutants to receiving waters.

Reach 4 of the Santa Ana River is listed as impaired for pathogens on the 2010 California 303(d) List of Water Quality Limited Segments. However, pathogens are not a constituent of concern from the railroad mainline. Therefore, the proposed project would not contribute to the existing impairment.

The proposed project would be required to comply with applicable National Pollution Discharge Elimination System (NPDES) permit requirements for construction and operation to protect the beneficial uses of waters. Under the Construction General Permit, the project would be required to prepare an SWPPP and implement construction BMPs detailed in the SWPPP during construction activities. Construction BMPs would include, but not be limited to, Erosion and Sediment Control BMPs designed to minimize erosion and retain sediment on-site and Good Housekeeping BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving waters.

The requirements of the Construction General Permit are based on the risk level of the project. The overall risk level is based on two factors: receiving water risk and sediment risk. Runoff from the project site would not discharge to a 303(d) listed waterbody impaired for sediment or discharge to a waterbody with designated beneficial uses of SPAWN, COLD, and MIGRATORY; therefore, the receiving water risk is low. Based on the anticipated construction schedule (September 2011 through March 2014), the project sediment risk would be high (soil loss = 267 tons/acre). Therefore the project would be Risk Level 2. Risk Level 2 projects are required to implement Good Housekeeping, Erosion Control, and Sediment Control BMPs; perform quarterly non-storm water discharge observations; weekly, pre-storm, interim storm, and

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post-storm inspections; prepare and implement a Rain Event Action Plan (REAP); collect storm water samples; and comply with the pH and turbidity Numeric Action Levels specified in the Construction General Permit.

In addition, Source Control, Site Design, and Treatment Control BMPs will be implemented in the project to target constituents of concern in runoff from the project area, in order to prevent degradation of receiving water quality with implementation of the proposed project. Proposed Treatment Control BMPs include non-vegetated drainage swales, detention basins, infiltration basins, and/or manufactured/proprietary devices to treat runoff from the elevated structure. **Measures HDY-1 and HDY-2** provided below, are regulatory requirements that would minimize project impacts to water quality. With compliance with existing NPDES permits, and implementation of BMPs that target pollutants of concern and pollutant loads, impacts related to water quality standards and waste discharge requirements are considered less than significant.

### **Avoidance, Minimization and/or Mitigation Measures**

The following measures shall be implemented during construction activities to avoid or minimize potential adverse impacts on water quality and hydrology.

**HDY-1** During construction, the Union Pacific Railroad (UPRR) shall comply with the provisions of the *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit) (Order No. 2009-0009-DWQ, NPDES No. CAS000002), and any subsequent permit, as they relate to construction activities for the project. This shall include submission of the Permit Registration Documents, including a Notice of Intent (NOI), risk assessment, site map, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and signed certification statement to the State Water Resources Control Board (SWRCB) via the Storm Water Multi-Application and Report Tracking System (SMARTS) at least 7 days prior to the start of construction. Construction activities shall not commence until a Waste Discharger Identification (WDID) number is received from the SMARTS. The SWPPP shall be prepared by a Qualified SWPPP Developer (QSD) and shall meet the requirements of the Construction General Permit and shall identify potential pollutant sources associated with construction activities; identify non-storm water discharges; develop a water quality monitoring and sampling plan; and identify, implement, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants associated with the construction site. BMPs shall include, but not be limited to, Good Housekeeping, Erosion Control, and Sediment Control BMPs. The BMPs identified in the SWPPP shall be implemented during project construction. UPRR will comply with the Risk Level 2 sampling and reporting requirements of the Construction General Permit. A Rain Event Action Plan (REAP) will be prepared and implemented by a Qualified SWPPP Developer (QSP) within 48 hours prior to a rain event of 50% or greater probability of precipitation according to the National Oceanic and Atmospheric Administration (NOAA). A Notice of Termination (NOT) shall be submitted to the SWRCB within 90 days of completion of construction and stabilization of the site.

**HDY-2** During final design, UPRR shall prepare a Final Water Quality Management Plan (WQMP) that details the Source Control, Site Design, and Treatment Control BMPs to be incorporated into the proposed project. The BMPs shall be consistent with the San Bernardino County Stormwater Program *Model Water Quality Management Plan Guidance* and *Water Quality Management Plan Template* and shall be properly

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designed, installed, and maintained to target pollutants of concern. The WQMP shall be submitted to the City of Colton and County of San Bernardino for review and approval.

***b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?***

**No Impact.** The proposed project would not deplete groundwater supplies or interfere with groundwater recharge, because, as an improvement to an existing railway, the proposed project will not utilize groundwater. Although the project would increase impervious surface area, runoff from the project area would continue to infiltrate at the graded ditches, drainage swales, detention basins, and/or infiltration basins. Due to the depth to groundwater (greater than 117 ft below ground surface), groundwater dewatering is not anticipated during project construction. Perched groundwater may be encountered during construction of the cast-in-drilled-hole (CIDH) piles; however, this would not require groundwater dewatering because perched groundwater would drain into the hole and dissipate. Although not anticipated, if groundwater is encountered during construction, any groundwater dewatering would be temporary and would not significantly deplete groundwater supplies. Therefore, the proposed project would not deplete groundwater supplies or interfere with groundwater recharge.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

***c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?***

**Less Than Significant Impact.** During construction activities, drainage patterns would be altered due to grading activities. As discussed above in Checklist Response IX.a., above, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. As specified **Measure HDY-2** (page 75), a regulatory requirement, construction BMPs including Erosion and Sediment Control BMPs would be implemented to minimize erosion and retain sediment on-site.

Construction of the proposed project would result in a permanent change to onsite drainage and flow patterns. Onsite drainage patterns historically flow to the east or south. The proposed project would create a high point at the top of the flyover structure, and as a result, runoff from half the project area would drain east and half would drain west. In addition, the 100-year storm discharge would be approximately 10 cubic feet per second (cfs), an increase of about 5 cfs above existing levels. Even though the onsite flow patterns would change, the project storm runoff would ultimately discharge to the Santa Ana River as it has done so historically. The proposed detention basins and infiltration basins would detain/retain runoff and discharge it at a rate comparable to existing condition to prevent downstream erosion. **Measures HDY-1** and **HDY-2** (page 75) are regulatory requirements that would minimize project impacts to water quality. Therefore, impacts related to erosion or siltation as result of drainage pattern or rivercourse changes considered less than significant with the implementation of **Measures HDY-1** and **HDY-2** (page 75).

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### Avoidance, Minimization and Mitigation Measures

Implementation of Measures HDY-1 and HDY-2 will avoid or minimize potential adverse impacts related to erosion or siltation.

**d) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?***

**Less Than Significant Impact.** The proposed project would change onsite drainage and flow patterns. Onsite drainage patterns historically flow to the east or south. The proposed project would create a high point at the top of the flyover structure, and as a result, runoff from half the project area would drain east and half would drain west. In addition, for onsite drainage, the 100-year storm discharge would be approximately 10 cfs, an increase of about 5 cfs above existing levels. To address this increase in storm flows, discharge from the western portion of the flyover structure would be directed to the existing basins near Rancho Avenue where the water will infiltrate. Flows from the structure to the east would be directed to the proposed basin near Mount Vernon Avenue.

Currently there are flooding conditions due to existing deficiencies in the storm drain systems which would be addressed by the proposed project. The Colton Southwest Storm Drain is inadequate under current conditions and ponding occurs at the corner of Valley Boulevard and I-10 Freeway because there is no outlet for the flow. As part of the proposed project, the open channel would be replaced with a 54 inch Reinforced Concrete Pipe (RCP), as described in Section 1.2.2, to address existing ponding within the project study area.

The 11th Street Storm Drain system is currently unable to accommodate runoff from a 25-year storm. Therefore, this storm drain within the project area would be replaced as part of the proposed project improvements. Proposed drainage improvements include three 72-inch smooth steel and/or corrugated metal pipes underneath the proposed flyover structure, as described in Section 1.2.2, to maintain the existing alignment of the drainage.

The proposed drainage improvements would be designed so that there would be no increase in the base flood elevations 11th Street and Colton Southwest Storm Drain floodplains. In addition, the proposed project would not preclude future master plan drainage improvements.

As discussed above, the project includes improvements that would improve existing flooding conditions. Therefore, impacts related to flooding as a result of drainage pattern or rivercourse changes, or increases in runoff, would be less than significant.

### Avoidance, Minimization and Mitigation Measures

No mitigation is required.

**e) *Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?***

**Less Than Significant Impact.** Approximately 1.25 cfs of the runoff from the project area would discharge to the Colton Southwest Storm Drain, approximately 1.25 cfs would discharge to

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the 3rd Street Storm Drain, and approximately 2.5 cfs would drain to either the 11th Street Storm Drain and/or the Warm Creek Channel just upstream of its confluence with Santa Ana River. The existing capacity of the Colton Southwest Storm Drain, the 3rd Street Storm Drain, and the 11th Street Storm Drain are 209 cfs, 405 cfs, and 290 cfs, respectively. The increase in flow to the storm drain system as a result of the project is minor in comparison to the existing capacity of these systems. However, currently there is flooding during major storm events due to existing deficiencies in the storm drain systems. which would be addressed by the proposed project. The proposed improvements are discussed above under Response IX.d., above.

In addition, as an improvement to an existing railroad facility, the project would not create new sources of pollutants. Implementation of Treatment Control BMPs, as noted in **Measure HDY-2** (page 75), would minimize any incremental pollutant loading associated with the increased impervious surface area of the proposed project. Therefore, for the reasons discussed above, the proposed project would not create or contribute runoff water which would exceed the capacity or existing planned storm water drainage systems or provide substantial additional sources of pollutant runoff and these impacts are considered less than significant.

### **Avoidance, Minimization and Mitigation Measures**

Implementation of **Measures HDY-2** will minimize any incremental pollutant loading associated with the increased impervious surface area of the proposed project.

#### **f) *Otherwise substantially degrade water quality?***

**Less Than Significant Impact.** Refer to the discussion above in Section IX(a). Implementation of **Measures HDY-1 and HDY-2** (page 75) will reduce impacts on water quality to less than significant.

### **Avoidance, Minimization and Mitigation Measures**

Implementation of **Measures HDY-1 and HDY-2** will reduce impacts on water quality from the proposed project.

#### **g) *Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazards delineation?***

**No Impact.** The proposed project does not propose the construction of housing in a 100-year flood hazard area; therefore, no impacts would occur.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

#### **h) *Place within a 100-year flood hazard area structures that would impede or redirect flood flows?***

**Less Than Significant Impact.** The proposed project would not result in longitudinal encroachments of a base (100-year) floodplain/floodway. At the 11<sup>th</sup> Street Storm Drain, the project improvements would cause a lateral encroachment into the floodplain/ floodway. The proposed replacement culvert would be designed to result in no net rise of the Base Flood

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Elevations upstream or downstream from the project. This would include outlet and inlet structures to convey flows along the culvert system. During the Plans, Specifications, and Estimates (PS&E) phase, additional or replacement culverts would be designed such that no increase in the Base Flood Elevations would occur.

At the Colton Southwest Storm Drain, the project improvements would also cause a lateral encroachment onto the 500-year floodplain but the bridge opening would provide a means for floodplain flows to continue through the project. Existing drainage patterns would be maintained through the project area (via the proposed bridge opening), allowing excess surface flows to be conveyed southerly similar to existing conditions. The proposed project would avoid impacts with the design of the bridge opening such that there is no increase to the base flood elevation. Flood flows would not be impeded or redirected, and impacts related to floodplain or floodway encroachment would be less than significant with implementation of **Measures HDY-3 and HDY-4** indicated below.

### **Avoidance, Minimization and/or Mitigation Measures**

The following measures shall be implemented during construction activities and project implementation to avoid or minimize potential adverse impacts on water quality and hydrology.

**HDY-3** The 11<sup>th</sup> Street culvert shall be designed during the Plans, Specifications, and Estimates (PS&E) phase such that the size of the additional or replacement culvert(s) shall result in no increases in the Base Flood Elevation. During PS&E, the effect of the proposed project on the Base Flood Elevation shall be confirmed as part of the Final Hydrology and Hydraulics Report prepared during this phase such that no impact to Base Flood Elevations occurs from the proposed project. The Final Hydrology and Hydraulics Report shall be prepared by a qualified registered professional engineer and shall be approved by UPRR.

**HDY-4** A No Rise Certification for the 11<sup>th</sup> Street Storm Drain shall be included as part of the Final Hydrology and Hydraulics Report, and shall be submitted to the City of Colton for review and approval, prior to completion of the Report.

***i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?***

**No Impact.** The proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as the result of the failure of a levee or dam because, as an improvement to an existing railway facility, the project would not increase flooding risk. Therefore, the project would not expose people or structures to a significant risk of flooding, and no impact would occur.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

***j) Expose people or structures to inundation by seiche, tsunami, or mudflow?***

**No Impact.** The proposed project would not be inundated by seiches, tsunami, or mudflow because it is not in an area where these features are present. Due to the distance of the project site

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from the ocean, there is no foreseeable risk of tsunami inundation. There is also no risk from seiches (oscillations in enclosed bodies of water caused by seismic waves) or mudflows in the project area due to the lack of large bodies of water or steep slopes in the project area. Therefore, no impacts related to inundation by seiche, tsunami, or mudflow would occur.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

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## X. LAND USE AND PLANNING

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### **a) Physically divide an established community?**

**No Impact.** The existing UPRR railroad tracks and I-10 freeway form a physical barrier that separates a predominantly residential neighborhood to the south and a commercial business corridor to the north along Valley Boulevard. The residential neighborhood is located between Rancho Avenue to the west and Mount Vernon Avenue to the east and immediately south of the project footprint. The neighborhood is characterized by extensively altered historic-period homes and a few historic-period commercial businesses. The original grid pattern of the streets has also been changed. K Street has cul-de-sacs in three places, La Cadena Drive has been realigned and rerouted under the railroad tracks, most of South 6th Street has been removed to accommodate the railroad, and Rancho Avenue was built in the 1960s. Predominantly office, service, and retail uses have become established on Valley Boulevard, creating a major commercial corridor within Colton (*Community Impact Assessment*, December 2010, prepared by LSA Associates, Inc.). The proposed project will replace the existing at-grade UPRR railroad tracks with an elevated structure traveling over the BNSF railroad tracks forming the new Colton Crossing rail-to-rail grade separation. The proposed project will not affect the existing residential and commercial neighborhoods north and south of the proposed project footprint and will not physically divide a community.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

### **b) Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

**No Impact.** The project footprint has been utilized for rail activities since 1875. These railroad uses and the existing adjacent residential neighborhood to the south have been in this configuration for over 100 years. The proposed project would result in the continuation of existing railroad uses within the project footprint and would not result in a significant change to existing land use patterns.

The project footprint west of Rancho Road is designated industrial in the County's General Plan and Zoning. East of Rancho Road, the project footprint is designated industrial and residential in the City's General Plan and Zoning designations. The area designated as residential is occupied by the UPRR rail yard and there is no intention of constructing residences on these properties.

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The residential designation appears to be a mapping error. The proposed project is consistent with the land use designations for the project footprint. The proposed project is also consistent with City policies that support maintenance of a strong industrial base, placement of industrial uses adjacent to railroads, and programs to improve local air quality and reduce airborne pollutants. The proposed project would reduce train idling in the area, which would reduce air pollutant emissions in the area and within the rail study area as a whole. Therefore, the proposed project would be consistent with applicable plans and policies and no impact related to consistency or compatibility with applicable land uses plans, policies or regulations would occur and no mitigation is required.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

#### **c) *Conflict with any applicable habitat conservation plan or natural community conservation plan?***

**No Impact.** As described previously in Checklist Response IV(f), the project site is not within the boundary of any approved habitat conservation plan (HCP) or natural community conservation plan (NCCP).

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

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## **XI. MINERAL RESOURCES**

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#### **a) *Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?***

**Less Than Significant Impact.** Data on potential mineral resources in the project area was originally researched and published by the California Department of Mines and Geology (CDMG), now the California Geological Survey (CGS), in Special Report 143, Part VII, “Classification of Sand and Gravel Resource Areas, San Bernardino Production – Consumption Region” dated 1984 (CDMG 1984). This report was updated in 2008 by Special Report 206 which did not change the boundaries of the designated mineral resource areas, but updated the total yield and economic value of the area’s mineral resources (CGS 2008).

According to DMG Special Report 143, the Santa Ana River, adjacent to the project site to the east, is classified as a Mineral Resource Zone 2 (MRZ-2) for its extensive sand and gravel deposits. This designation means that “adequate information indicates that significant mineral deposits are present, or there is a high likelihood for their presence” (CDMG 1987). In addition, the Slover Mountain facility just west of the site is a designated mine which has yielded large amounts of marble and limestone in the past and is still in active production.

The Open Space and Conservation Element of the City of Colton General Plan indicates that Slover Mountain is the primary mineral resource in the City (Colton GP, OSCE page 6-5).

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Available information indicates the project site is not within a designated MRZ or Aggregate Resource Area (ARA) (CDMG 1987). Therefore, the proposed project will not have any impact on mineral resources,

### Avoidance, Minimization and Mitigation Measures

No mitigation is required.

#### **b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?**

**No Impact.** The proposed project site is not classified as an area with important mineral resources by the City of Colton or the County of San Bernardino in their General Plans. Therefore, the proposed project would not impact locally important mineral resource recovery site.

### Avoidance, Minimization and Mitigation Measures

No mitigation is required.

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## XII. NOISE

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The analysis in this section is based on the comprehensive *Noise and Vibration Assessment*, December 2010 prepared for the proposed project by ATS Consulting.

#### **a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

**Less Than Significant Impact.** Noise impacts and benefits for the Colton Crossing project have been estimated based on the criteria provided in the Federal Railroad Administration (FRA 2005) and the Federal Transit Administration (FTA 2006) guidance manuals.

**Operational Noise Thresholds.** Per the FRA/FTA guidance, an existing noise of 60 dBA day-night averaged noise level ( $L_{dn}$ ) yields a threshold of 57.8 dBA  $L_{dn}$  for moderate impacts and 63.4 dBA  $L_{dn}$  for severe impacts for the proposed project.

**Construction Noise Thresholds.** FRA/FTA guidelines state that an appropriate impact threshold for construction noise is a 30-day average  $L_{dn}$  of 75 dBA or ambient plus 10 decibels, whichever is *greater*. Because the existing noise levels in much of the project area are quite high, the impact threshold selected for the analysis of construction noise impacts is a 30-day average  $L_{dn}$  of 75 dBA

**Existing Noise Sources.** The existing noise environment in the study area is dominated by freight and passenger trains on the BNSF and UPRR tracks and vehicular traffic on the I-10 freeway. The use of horns as trains approach at-grade road/rail crossing is by far the loudest noise source in the study area. Other rail-related noise sources are the locomotive engines, the rail cars, wheel squeal when trains traverse the tight radius curves of the connection tracks in the northwest and southeast quadrants of the Colton Crossing, wheel impacts at turnouts, crossovers and the

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diamond crossing, and various noises from activities within the UPRR yard south of the I-10 freeway. The noise assessment identified 19 sensitive receptor locations (R1 - R19) in the project area. Table 3.12.A identifies the existing noise levels at these locations. The location of these receptors is shown in Figure 3.12.1.

**Table 3.12.A: Summary of Noise Impact Assessment**

| Receiver | Side of I-10 | Noise Levels, $L_{dn}$ (dBA) |                    |                    |       |                    |       | Change Due to Project <sup>3)</sup> |      | Impact/No Change/Benefit (I/N/B) |          |
|----------|--------------|------------------------------|--------------------|--------------------|-------|--------------------|-------|-------------------------------------|------|----------------------------------|----------|
|          |              | Existing                     |                    | Future             |       |                    |       | 2015                                | 2035 | 2015                             | 2035     |
|          |              | 2009 <sup>1)</sup>           | 2010 <sup>2)</sup> | 2015 <sup>2)</sup> |       | 2035 <sup>2)</sup> |       |                                     |      |                                  |          |
|          |              | No Build                     | No Build           | No Build           | Build | No Build           | Build |                                     |      |                                  |          |
| R1       | N            | 72                           | 72                 | 73                 | 73    | 75                 | 75    | 0                                   | 0    | N                                | N        |
| R2       | N            | 82                           | 82                 | 83                 | 83    | 85                 | 85    | 0                                   | 0    | N                                | N        |
| R3       | N            | 94                           | 95                 | 95                 | 95    | 97                 | 97    | 0                                   | 0    | N                                | N        |
| R4       | N            | 80                           | 81                 | 81                 | 81    | 83                 | 83    | 0                                   | 0    | N                                | N        |
| R5       | N            | 78                           | 79                 | 80                 | 80    | 82                 | 82    | 0                                   | 0    | N                                | N        |
| R6       | N            | 87                           | 89                 | 89                 | 89    | 92                 | 92    | 0                                   | 0    | N                                | N        |
| R7       | N            | 87                           | 89                 | 89                 | 89    | 92                 | 92    | 0                                   | 0    | N                                | N        |
| R8       | N            | 70                           | 71                 | 72                 | 72    | 74                 | 74    | 0                                   | 0    | N                                | N        |
| R9       | N            | 74                           | 75                 | 76                 | 76    | 79                 | 79    | 0                                   | 0    | N                                | N        |
| R10      | N            | 64                           | 66                 | 66                 | 67    | 69                 | 69    | 0                                   | 0    | N                                | N        |
| R11      | N            | 75                           | 77                 | 78                 | 78    | 80                 | 80    | 0                                   | 0    | N                                | N        |
| R12      | N            | 71                           | 76                 | 76                 | 76    | 77                 | 77    | 0                                   | 0    | N                                | N        |
| R13      | S            | 76                           | 76                 | 77                 | 73    | 79                 | 75    | -4                                  | -4   | <b>B</b>                         | <b>B</b> |
| R14      | S            | 75                           | 82                 | 83                 | 78    | 85                 | 80    | -5                                  | -5   | <b>B</b>                         | <b>B</b> |
| R15      | S            | 80                           | 83                 | 84                 | 84    | 87                 | 87    | 0                                   | 0    | N                                | N        |
| R16      | S            | 68                           | 69                 | 70                 | 70    | 72                 | 73    | 0                                   | 0    | N                                | N        |
| R17      | S            | 78                           | 78                 | 79                 | 79    | 81                 | 81    | 0                                   | 0    | N                                | N        |
| R18      | S            | 73                           | 72                 | 72                 | 73    | 74                 | 75    | 0                                   | 0    | N                                | N        |
| R19      | S            | 64                           | 64                 | 65                 | 64    | 66                 | 66    | 0                                   | 0    | N                                | N        |

1 Based on measurements in 2009.

2 Based on noise models that were calibrated to the noise measurements from 2009.

3 Because of round-off error, some differences are off by 1 decibel.

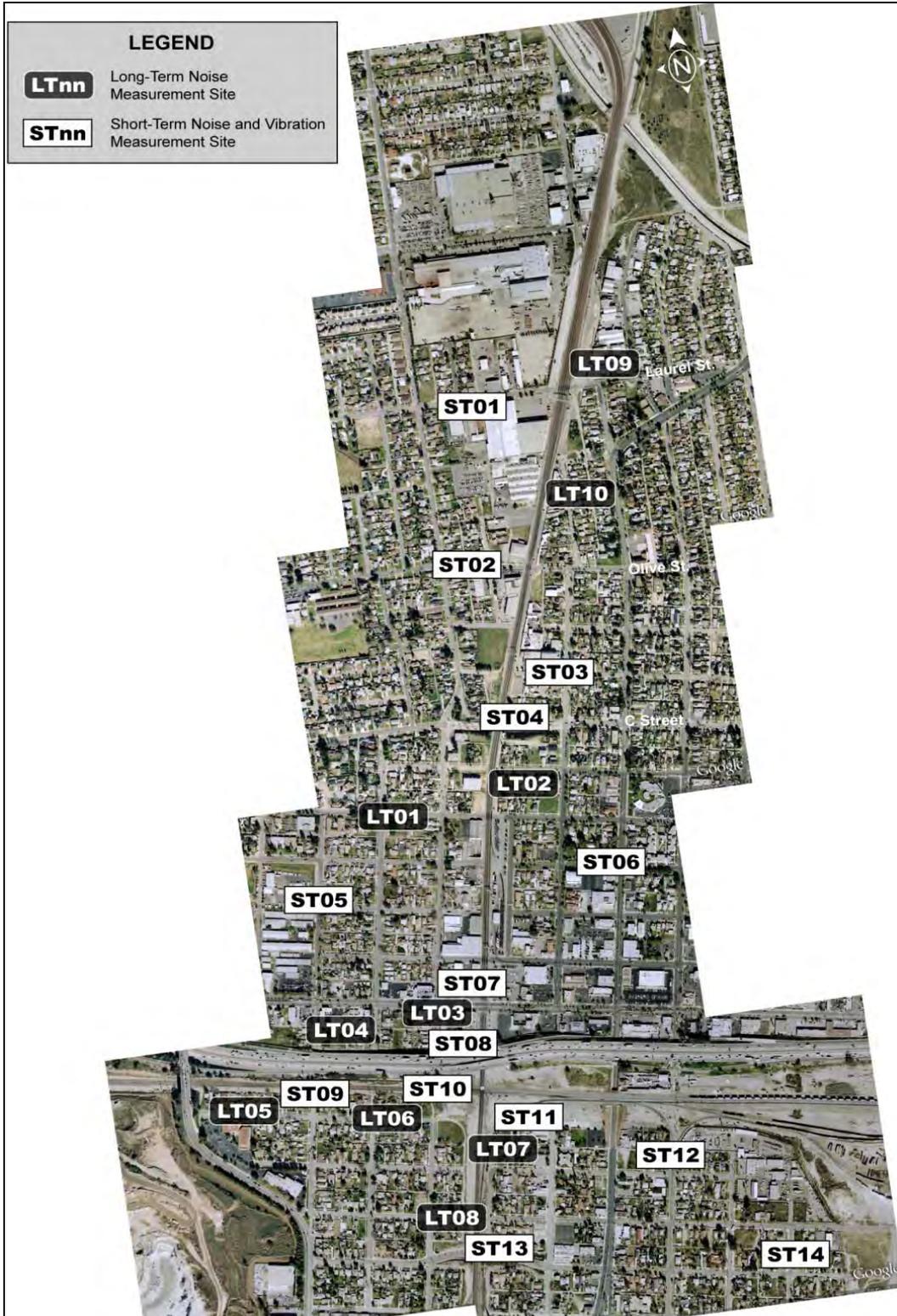


Figure 3.12-1: Noise and Vibration Measurement Sites

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The primary noise sources in residential areas north of I-10 were freight trains, Metrolink commuter trains, and traffic noise from the freeway and surface arterials. However, train horns generated the highest noise levels near the road/rail at-grade crossing locations. The noise sources in residential areas south of the I-10 freeway were similar to those north of the freeway; however, there are fewer road/rail at-grade crossings where train horns must be sounded, so there was substantially less horn noise south of the freeway. The one notable exception to this is that most BNSF trains and half of the UPRR trains were observed to sound their horns as they approached the diamond that switches trains onto different tracks at the Colton Crossing. FRA requirements are that, unless a special quiet zone has been established, horns on the lead locomotive must be sounded starting a quarter mile or 20 seconds before any at-grade rail/roadway crossing. The horn is to be sounded in a long-long-short-long pattern with the sequence ending as the lead locomotive clears the grade crossing. The horns are required to generate a sound level of 94 to 105 dBA at a distance of 100 feet in front of the locomotive. The maximum measured sound level from the horns exceeded 100 dBA at two locations near BNSF grade crossings and exceeded 90 dBA at several other locations.

Additional noise sources south of I-10 are trains operating on the connector track in the southeast quadrant of the Colton Crossing and noise from operations in the UPRR yard. Trains operating on the connector track were observed to generate wheel squeal, although lubrication was being used at the time of the measurements that reduced the amount of wheel squeal. More wheel squeal was noticed on the connector track in the northwest quadrant than on the connector track in the southeast quadrant. At this connector track, however, the squeal occurred when the trains passed under the I-10 freeway and where the sensitive receivers are shielded from the squeal noise by the freeway structure.

### **Short-Term Impacts**

As shown in Table 3.12.B, typical noise levels at 50 feet from an active construction area range up to 91 dBA  $L_{max}$  during the noisiest construction phases. The site preparation phase, such as soil movement, grading and paving, tends to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings. Table 3.12.C shows that the maximum noise impact distance would be 160 feet during construction of the overhead structure and trackwork.

As discussed previously, the construction noise impact threshold being used for this project is a 30-day average  $L_{dn}$  of 75 dBA. Assuming that noise-producing construction activities would be largely limited to daytime hours (7 a.m. to 10 p.m.), the impact threshold would not be exceeded as long as the daytime  $L_{eq}$  from construction activities is lower than 75 dBA.

**Table 3.12.B: Typical Construction Equipment Noise Levels**

| Equipment Description      | $L_{max}$ at 50 feet <sup>(1)</sup> (dBA) | Typical Usage Factor <sup>(2)</sup> | Impact Device? |
|----------------------------|---|-------------------------------------|----------------|
| All other equipment > 5 HP | 85  | 50                                  | No             |
| Auger drill rig            | 85  | 20                                  | No             |
| Backhoe                    | 80  | 40                                  | No             |
| Bar bender                 | 80  | 20                                  | No             |
| Blasting                   | 94  | N/A                                 | Yes            |
| Boring jack power unit     | 80  | 50                                  | No             |

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**Table 3.12.B: Typical Construction Equipment Noise Levels**

| Equipment Description               | L <sub>max</sub> at 50 feet <sup>(1)</sup> (dBA) | Typical Usage Factor <sup>(2)</sup> | Impact Device? |
|-------------------------------------|--|-------------------------------------|----------------|
| Chain saw                           | 85   | 20                                  | No             |
| Clam shovel                         | 93   | 20                                  | Yes            |
| Compactor (ground)                  | 80   | 20                                  | No             |
| Compressor (air)                    | 80   | 40                                  | No             |
| Concrete batch plant                | 83   | 15                                  | No             |
| Concrete mixer truck                | 85   | 40                                  | No             |
| Concrete pump truck                 | 82   | 20                                  | No             |
| Concrete saw                        | 90   | 20                                  | No             |
| Crane (mobile or stationary)        | 85   | 16                                  | No             |
| Dozer                               | 85   | 40                                  | No             |
| Dump truck                          | 84   | 40                                  | No             |
| Excavator                           | 85   | 40                                  | No             |
| Flatbed truck                       | 84   | 40                                  | No             |
| Front end loader                    | 80   | 40                                  | No             |
| Generator (25 kVA or less)          | 70   | 50                                  | No             |
| Generator (more than 25 kVA)        | 82   | 50                                  | No             |
| Gradall                             | 85   | 40                                  | No             |
| Grader                              | 85   | 40                                  | No             |
| Horizontal boring hydraulic jack    | 80   | 25                                  | No             |
| Hydra break ram                     | 90   | 10                                  | Yes            |
| Impact pile driver (diesel or drop) | 95   | 20                                  | Yes            |
| Jackhammer                          | 85   | 20                                  | Yes            |
| Impact hammer (hoe ram)             | 90   | 20                                  | Yes            |
| Paver                               | 85   | 50                                  | No             |
| Pickup truck                        | 55   | 40                                  | No             |
| Pneumatic tools                     | 85   | 50                                  | No             |
| Pumps                               | 77   | 50                                  | No             |
| Rock drill                          | 85   | 20                                  | No             |
| Scraper                             | 85   | 40                                  | No             |
| Slurry plant                        | 78   | 100                                 | No             |
| Slurry trenching machine            | 82   | 50                                  | No             |
| Soil mix drill rig                  | 80   | 50                                  | No             |
| Tractor                             | 84   | 40                                  | No             |
| Vacuum street sweeper               | 80   | 10                                  | No             |
| Vibratory concrete mixer            | 80   | 20                                  | No             |
| Vibratory pile driver               | 95   | 20                                  | No             |
| Welder/Torch                        | 73   | 40                                  | No             |

(1) Sound level when operating at close to maximum load condition.

(2) Percent of work shift that equipment typically is in use.

Source: ATS 2010 Table 16 and FHWA 2006 and Caltrans 2009 as cited in ATS 2010.

It should be noted that it may be necessary to perform some work at night during the course of the project. Examples of the type of work that may be performed would be railroad track and signal cutovers, bridge/culvert construction or replacement that would affect main tracks, or utility work that would need to be performed during off-peak hours. It is anticipated that most construction activities will occur during weekdays, but it is possible that a limited amount of work will be performed at night or on the weekends for safety or logistical reasons.

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Assuming that when nighttime construction must be performed, the  $L_{dn}$  would be dominated by noise during the nighttime hours (10 p.m. to 7 a.m.), the impact threshold would not be exceeded as long as the nighttime  $L_{eq}$  from construction activities is less than 69 dBA.

Table 3.12.C also shows the predicted levels of construction noise at the residences in the southwest and southeast quadrants that would be closest to the construction zone. Major construction activities would be approximately 120 to 160 feet from the first row of residences in the southwest quadrant of the diamond crossing. The closest residences in the southeast quadrant would be more than 160 feet from major construction activities. The highest predicted work shift  $L_{eq}$  is 79 dBA at the closest residences in the southwest quadrant (between 5<sup>th</sup> Street and Rancho Avenue) and is 70 dBA at the closest residence in the southeast quadrant.

**Table 3.12.C: Noise Impact Distances for Major Construction Phases**

| Construction Activity             | $L_{eq}$ at 50 feet (dBA) | Impact Distance (feet)              |                                       | Predicted Noise, $L_{eq}$ (dBA)   |                                   |
|-----------------------------------|---------------------------|-------------------------------------|---------------------------------------|-----------------------------------|-----------------------------------|
|                                   |                           | Daytime Construction <sup>(1)</sup> | Nighttime Construction <sup>(2)</sup> | Southwest Quadrant <sup>(3)</sup> | Southeast Quadrant <sup>(4)</sup> |
| Demolition, clearing and grubbing | 85                        | 130                                 | 320                                   | 78                                | 68                                |
| Install drainage improvements     | 84                        | 120                                 | 300                                   | 77                                | 68                                |
| Site grading                      | 85                        | 130                                 | 310                                   | 77                                | 68                                |
| Foundation work                   | 86                        | 140                                 | 360                                   | 78                                | 69                                |
| Retaining walls                   | 84                        | 120                                 | 270                                   | 76                                | 67                                |
| OH structures                     | 87                        | 160                                 | 400                                   | 79                                | 70                                |
| Trackwork                         | 87                        | 160                                 | 400                                   | 79                                | 70                                |
| Construct signal                  | 82                        | 90                                  | 220                                   | 74                                | 65                                |
| <b>Maximum</b>                    | <b>87</b>                 | <b>160</b>                          | <b>400</b>                            | <b>79</b>                         | <b>70</b>                         |

- (1) Impact distance is based on an impact occurring when the work shift  $L_{eq}$  would exceed 77 dBA at a sensitive receptor for more than 30 days (equivalent to  $L_{dn}$  exceeding 75 dBA when there is limited construction during the nighttime hours of 10 p.m. to 7 a.m.). Estimated impact distances have been rounded to the nearest 10 feet.
- (2) Impact distance is based on an impact occurring when the work shift  $L_{eq}$  would exceed 69 dBA at a sensitive receptor for more than 30 days (equivalent to  $L_{dn}$  exceeding 75 dBA when there is extensive construction during the nighttime hours of 10 p.m. to 7 a.m.). Estimated impact distances have been rounded to the nearest 10 feet.
- (3) The closest receiver in the southwest quadrant of the Colton Crossing diamond frog is 120 feet from the future construction activities. This quadrant extends from 5<sup>th</sup> Street to Rancho Avenue.
- (4) The closest receiver in the southeast quadrant of the Colton Crossing diamond frog is 350 feet from the future construction activities.

Table 3.12.C indicates that construction noise is likely to exceed the daytime impact threshold of 77 dBA  $L_{eq}$  by approximately 2 decibels at the closest residences in the southwest quadrant but unlikely to exceed the threshold in the southeast quadrant. In addition, when nighttime construction is required, the construction noise is likely to exceed the nighttime impact threshold of 69 dBA by up to 10 decibels in the southwest quadrant and by approximately 1 decibel in the southeast quadrant.

Another potential noise impact during construction would be from trucks on haul routes and accessing the staging areas. The major haul routes would avoid residential areas. This noise has been incorporated into the construction site noise predictions. The one potential access route that could cause noise impacts to adjacent residences is the access along South 5<sup>th</sup> Street to the

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potential staging area in the southwest quadrant of the Colton Crossing. It is anticipated that this staging area would be utilized on a limited basis for materials storage and the number of vehicles accessing this staging area would be approximately 10 per day. The noise from these vehicles would be approximately 50 dBA  $L_{eq}$  at the residences along South 5<sup>th</sup> Street, substantially less than the daytime work shift impact threshold of 77 dBA  $L_{eq}$  and the nighttime work shift impact threshold of 69 dBA  $L_{eq}$ .

With implementation of **Measure NOI-1** indicated below, potential construction noise impacts within the southeast and southwest quadrants would be minimized and are considered less than significant.

### **Long-Term Impacts**

Future noise levels with the no project and proposed project are provided in Table 3.12.A. As shown in Table 3.12.A, 17 of the 19 receptor locations show no change in projected noise levels, while two locations show reductions for one or both of the future horizon years (2015 and 2035). The two sites that show decreases in projected future noise levels corresponded to monitoring sites R13 and R14. Monitoring site R13 shows a 4 dBA reduction by 2015 and 2035. Similarly, monitoring site R14 shows a 5 dBA reduction by 2015 and 2035. The proposed project is expected to reduce noise levels incrementally along the northern rail line by reducing idling that currently results when trains on the northern line wait for trains on the east-west line to pass the diamond interchange

Completion of the proposed project is expected to have an effect on the use of train horns in the project study area. One location where use of train horns might change as a result of the proposed project is at the diamond crossing. The vast majority of the UPRR trains would use the flyover. The UPRR trains would still sound their horns when there were maintenance workers on the flyover, which would happen less frequently than it does under current conditions. In addition to a reduction in train horn noise, overall noise impacts from the project site would be reduced by: reducing the diamond crossing for the mainline tracks from the existing four to two; changing the design of the diamond crossing to a flange bearing frog design; substantial reduction of UPRR trains using the diamond crossing; and there would be a general reduction in maintenance activities in the area as a result of the proposed project. In addition, incidents involving non-railroad personnel near on the tracks that trigger usage of UPRR horns would be substantially reduced with the proposed project. The proposed project also would tend to reduce horn sounding on the BNSF tracks because there would be less maintenance work at the diamond crossing.

Therefore, the proposed project will result in generally a no long-term noise impact in the project area, and noise levels at several locations will actually be reduced as a result of the proposed rail improvements.

### **Avoidance, Minimization and/or Mitigation Measures**

The following measure will minimize potential construction noise impacts at residences south of the UPRR right-of-way, in particular the residences between Rancho Avenue and 5<sup>th</sup> Street.

**NOI-1** Development of a Noise Control Plan by the contractor will be included in the project specifications approved by UPRR. The contractor will be required to have a qualified acoustical professional develop a Noise Control Plan that demonstrates how the contractor will achieve the noise limits in Table 3.12.D. The plan will include measurements of existing noise, a list of the major pieces of construction equipment

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that will be used, and predictions of the noise levels at the closest noise-sensitive receptors. The Noise Control Plan prepared by the contractor will be approved by UPRR prior to construction. Measures to be included in the Noise Control Plan shall include, but not be limited to, the following:

- Specific noise limits that shall not be exceeded will be identified. The recommended noise limits are given in Table 3.12.D. Also, the contractor shall be required to conduct noise monitoring to demonstrate compliance with contract noise limits.
- Require the contractor to only use equipment that meets the noise limits in Table 3.12.D.
- Where the construction cannot be performed in accordance with the requirements of the noise limits, the contractor shall be required to investigate alternative construction measures that would result in lower sound levels.
- The contractor shall be required to use the following best management practices for noise abatement whenever practical:
  - Utilize specialty equipment equipped with enclosed engines and/or high performance mufflers, as feasible.
  - Locate equipment and staging areas as far from noise-sensitive receptors as possible.
  - Limit unnecessary idling of equipment.
  - Install temporary noise barriers as needed where feasible.
  - Reroute construction-related truck traffic away from residential streets to the extent permitted by the relevant municipality.
  - Avoid impact pile driving where possible. Current construction plans do not include any impact pile driving.

**Table 3.12.D: Recommended Limits on Construction Noise**

| Land Use   | Recommended Maximum Allowable Sound Level, dBA |                 |                   |                   |
|--|--|-----------------|-------------------|-------------------|
|  | Daytime  |                 | Nighttime         |                   |
|  | $L_{eq}^{(a,c)}$                               | $L_{max}^{(b)}$ | $L_{eq}^{(a,d)}$  | $L_{max}^{(b)}$   |
| FRA/FTA Category 2, Residential Land Uses (includes hotels/motels, and any other locations where people sleep) | 75   | 85              | 69                | 79                |
| FRA/FTA Category 3, Institutional Land Uses (schools, churches, libraries, theaters)                           | 75   | 85              | 75 <sup>(e)</sup> | 85 <sup>(e)</sup> |

**Table 3.12.D: Recommended Limits on Construction Noise**

| Land Use | Recommended Maximum Allowable Sound Level, dBA |                 |                  |                 |
|----------|--|-----------------|------------------|-----------------|
|          | Daytime  |                 | Nighttime        |                 |
|          | $L_{eq}^{(a,c)}$                               | $L_{max}^{(b)}$ | $L_{eq}^{(a,d)}$ | $L_{max}^{(b)}$ |

Note: These noise limits are applicable at the property line of the affected land use

- (a)  $L_{eq}$  is the root-means-square sound level measured over a 20-minute period.
- (b)  $L_{max}$  is the maximum instantaneous sound level measured using the "slow" setting on a standard sound level meter.
- (c) If baseline daytime  $L_{eq}$  is greater than 70 dBA, the allowable level of construction noise is increased to: Noise Limit = baseline daytime  $L_{eq}+5$  dB. The baseline  $L_{eq}$  must be established by measurements of existing noise levels prior to initiation of construction. The minimum measurement period for establishing baseline  $L_{eq}$  is 21 days.
- (d) If baseline nighttime  $L_{eq}$  is greater than 66 dBA, the allowable level of construction noise is increased to: Noise Limit = baseline nighttime  $L_{eq}+3$  dB. The baseline  $L_{eq}$  must be established by measurements of existing noise levels prior to initiation of construction. The minimum measurement period for establishing baseline noise  $L_{eq}$  is 21 days.
- (e) For noise-sensitive facilities with primarily daytime use, there are no nighttime noise limits unless the facility is in use. The daytime noise limits apply when the facility is in use during nighttime hours.

Source: Table 23, ATS 2010

**b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

**Less Than Significant Impact.**

**Vibration Thresholds**

*Operational Threshold.* The FRA/FTA has issued guidance on how to assess vibration impacts for a corridor that already is heavily used.

- If the project will not cause a significant increase in the number of vibration events and the project will result in vibration levels that are at no more than 5 decibels greater than the existing vibration, the existing train traffic can be ignored and the standard vibration impact thresholds can be applied. A significant increase in rail traffic is defined by FRA and FTA as an approximate doubling of the number of trains.
- If the project would cause the existing rail tracks to be relocated closer to sensitive receivers, impact occurs if the relocation would result in at least a 3 decibel increase in vibration levels and the resulting vibration level would exceed the FRA/FTA impact threshold.

This means that the condition under which vibration impact could occur for the proposed project is that the predicted vibration levels exceed the existing vibration levels by at least 3 decibels and exceed the applicable impact threshold (72 VdB).

*Construction Threshold.* The FTA/FRA uses two thresholds for assessing impacts from construction vibration. The first is a peak particle velocity (PPV) of 0.5 in/sec, which is considered a safe vibration level to avoid even minor cosmetic damage to typical residential structures. The predicted vibration levels are well below this limit at a distance of 25 feet from the construction equipment.

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The second threshold is based on the potential for the vibration to be annoying and intrusive to building occupants. For this effect, the FTA and FRA manuals recommend using the same impact thresholds that are used to assess impacts from train vibration. The FRA/FTA impact threshold from train vibration is 72 VdB for residential land uses, which translates to a PPV of 0.016 in/sec.

### Existing Conditions

The existing vibration environment in the study area is very similar to the noise environment and is dominated by freight and passenger trains on the BNSF and UPRR tracks and vehicular traffic on the I-10 freeway. The use of horns as trains approach at-grade road/rail crossing is by far the loudest noise source in the study area. Other rail-related vibration sources are the locomotive engines, the rail cars, when trains traverse the tight radius curves of the connection tracks in the northwest and southeast quadrants of the Colton Crossing, wheel impacts at turnouts, crossovers and the diamond crossing, and various activities within the UPRR yard. Table 3.12.E illustrates the existing modeled vibration levels. Ambient vibration in the project area was dominated by the train pass-bys.

**Table 3.12.E: Summary of Vibration Impact Analysis**

| Receiver         | Vibration Velocity Level, $L_{max}$ (VdB)       |                            |                                |                  | Impact/ No Impact / Benefit (I/N/B) |
|------------------|---|----------------------------|--------------------------------|------------------|-------------------------------------|
|                  | Existing (2010) & Future No Build (2015 & 2035) | Future Build (2015 & 2035) | Build - No Build (2015 & 2035) | Impact Threshold |                                     |
| R1               | 62  | 62                         | 0                              | N/A              | N                                   |
| R2               | 84  | 84                         | 0                              | N/A              | N                                   |
| R3               | 87  | 87                         | 0                              | N/A              | N                                   |
| R4               | 76  | 76                         | 0                              | N/A              | N                                   |
| R5               | 73  | 73                         | 0                              | N/A              | N                                   |
| R6               | 83  | 83                         | 0                              | N/A              | N                                   |
| R7               | 86  | 86                         | 0                              | N/A              | N                                   |
| R8               | 70  | 70                         | 0                              | N/A              | N                                   |
| R9               | 72  | 72                         | 0                              | N/A              | N                                   |
| R10              | 69  | 69                         | 0                              | N/A              | N                                   |
| R11              | 72  | 72                         | 0                              | N/A              | N                                   |
| R12              | 69  | 69                         | 0                              | N/A              | N                                   |
| R13 <sup>1</sup> | 85  | 66                         | -19                            | N/A              | <b>B</b>                            |
| R14              | 76  | 67                         | -9                             | N/A              | <b>B</b>                            |
| R15              | 73  | 73                         | 0                              | N/A              | N                                   |
| R16              | 73  | 73                         | 0                              | N/A              | N                                   |
| R17              | 86  | 86                         | 0                              | N/A              | N                                   |
| R18              | 77  | 77                         | 0                              | N/A              | N                                   |
| R19              | 69  | 69                         | 0                              | N/A              | N                                   |

1 Assumes that the special trackwork on the existing tracks would be replaced with flange-bearing frogs and would be used only by a limited number of trains for local movements. The majority of the trains would use the UPRR mainline on the flyover, which would have no special trackwork.

Source: ATS, December 2010

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### Short-Term Impacts

The two construction operations most likely to cause building damage are blasting and pile driving, neither of which would be used during construction of the proposed project. Other activities, such as the use of tracked vehicles (e.g., bulldozers) and vibratory compactors, could result in perceptible levels of groundborne vibration; however, these activities would be limited in duration and vibration levels are well below thresholds for minor cosmetic building damage. Table 3.12.F shows the approximate vibration velocity level at 25 feet for the equipment expected to generate the highest vibration levels during each construction phase.

**Table 3.12.F: Construction Vibration Velocity Levels**

| Construction Activity <sup>(a)</sup> | Most Vibratory Equipment | Reference Equipment | Ref PPV @ 25 feet (in/sec) | Approximate Distance to PPV of 0.016 in/sec <sup>(b)</sup> |
|--------------------------------------|--------------------------|---------------------|----------------------------|--|
| Demolition, clearing and grubbing    | Bulldozer (Cat D-7)      | Large Bulldozer     | 0.089                      | 80 feet  |
| Install Drainage Improvements        | Compaction Machinery     | Vibratory Roller    | 0.21                       | 140 feet   |
| Site Grading                         | Compactor                | Vibratory Roller    | 0.21                       | 140 feet   |
| Foundation Work                      | Crane-mounted Drill      | Caisson drilling    | 0.089                      | 80 feet  |
| Trackwork                            | Compactor                | Vibratory Roller    | 0.21                       | 140 feet   |
| Construct Signal                     | Boring Machine           | Caisson drilling    | 0.089                      | 80 feet  |

(a) Construction Activities A, F, G, and I are not anticipated to require use of high-vibration generating equipment.

(b) Distance at which the FRA/FTA vibration annoyance threshold of 72 VdB is reached.

Source: Table 22, ATS, December 2010

As discussed previously, there are two thresholds for impact from construction vibration. The first is a PPV of 0.5 in/sec, which is considered a safe vibration level to avoid even minor cosmetic damage to typical residential structures. As shown in Table 3.12.I, the predicted vibration levels are well below this limit at a distance of 25 feet from the construction equipment.

The second threshold is 72 VdB for residential land uses, which translates to a PPV of 0.016 in/sec. As shown in Table 3.12.I, a PPV of 0.016 in/sec could occur at distances of about 140 feet from a vibratory compactor. This means that some construction processes have the potential to generate vibration levels that exceed the limits for annoyance at the residences south of the construction site and west of the BNSF tracks (between Rancho Avenue and 5<sup>th</sup> Street). It is important to recognize that although these vibration levels may be perceptible inside residences, they are well below what is required to cause structural damage or even minor cosmetic damage. Potential construction vibration impacts within the southwest quadrant of the existing crossing would be minimized with implementation of Measure NOI-1 and are considered less than significant levels.

### Long-Term Impacts

Similar to the conclusions reached regarding project noise, 17 of the 19 sensitive receptor locations show no increase in projected vibration levels, while two locations show reductions for one or both of the future horizon years (2015 and 2035). The calculations for each receptor site are shown in Table 3.12.E. The two monitoring sites that showed decreases in projected future vibration levels are R13 and R14, as shown in Figure 3.12-1. Monitoring site R13 shows a 19 dBA reduction by 2015 and 2035, while the R14 shows a 9 dBA reduction by 2015 and 2035.

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Therefore, the proposed project will not result in any increases in long-term vibration levels in the project area for the majority of receptors, and vibration levels at two locations will be reduced after construction of the proposed rail improvements. The proposed project would have no effect on vibration levels at most locations, and would result in a beneficial reduction in vibration levels at residences between Rancho Avenue and 5<sup>th</sup> Street.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

#### ***c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?***

***Less Than Significant Impact.*** The previous analysis in Checklist Response XII(a) determined that the proposed project would not increase long-term noise levels compared to applicable thresholds and standards. In some locations, long-term noise levels would actually be reduced by eliminating horn noise, and reducing delay at the Colton Crossing and at-grade crossings north of the I-10 freeway.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

#### ***d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?***

***Less Than Significant Impact*** The previous analysis in Checklist Response XIII(b) determined that the proposed project would result in a short-term increase in noise levels compared to applicable thresholds and standards, especially in those residential neighborhoods immediately south of the Colton Yard. These levels would be minimized with implementation of **Measure NOI-1** (page 88). These construction noise levels are considered less than significant.

### **Avoidance, Minimization and Mitigation Measures**

Implementation of **Measure NOI-1** will minimize the adverse impacts of construction noise from the proposed project.

#### ***e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?***

***No Impact.*** The closest airport to the project site is the San Bernardino International Airport (SBIA). According to the “Airport Influence Area Map” on the SBIA website, the proposed project site is located 2.7 miles southwest of SBIA and is not within the influence area of that facility. Therefore, the proposed project will not have any effect on, or be affected by, any airport operations (SBIA website 2010).

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### Avoidance, Minimization and Mitigation Measures

No mitigation is required.

**f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?**

**No Impact.** The project site is not located within two miles of a private airstrip, so there would be no noise impacts associated with private airstrips.

### Avoidance, Minimization and Mitigation Measures

No mitigation is required.

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## XIII. POPULATION AND HOUSING

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**a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?**

**No Impact.** Under CEQA, growth inducement is not necessarily considered detrimental, beneficial, or of little significance to the environment. Typically, the growth-inducing potential of a project would be considered significant if it fosters growth or a concentration of population in excess of what is assumed in pertinent master plans, land use plans, or in projections made by regional planning agencies (e.g., SCAG). Significant growth impacts could also occur if the project provides infrastructure or service capacity to accommodate growth beyond the levels currently permitted by local or regional plans and policies. In general, growth related effects of a project are considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way.

The proposed project does not warrant the expansion of existing utility (e.g., water and wastewater treatment) facilities in the project area. In addition, the proposed project does not include a residential or commercial component; therefore, there would be no increase in population from implementation of the proposed project. Therefore, the development of the proposed project would not induce growth in an area currently devoid of public improvements, or promote the extension of infrastructure in a manner facilitating an uneven pattern (e.g., leapfrog development) of development in the City.

The proposed project would result in the provision of a continuous UPRR rail line along the existing rail corridor through the construction of a rail flyover. The proposed project is not expected to affect local growth beyond what is identified in the City of Colton and San Bernardino County General Plans since there would be no property acquisition within the project area (with the exception of the Department parcel acquisition) and there is no railroad-associated development occurring within the existing rail yards or adjacent properties. Growth in the City of Colton and San Bernardino County is expected to occur with or without the proposed project because the proposed project on its own cannot affect variables such as economic opportunities,

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employment, or housing availability, which directly affect local and regional development growth.

The proposed project's effect on rail growth was evaluated as part of the *Rail Operations Analysis* (February 2011). As documented in the Rail Operations Analysis, trains operating on the BNSF and UPRR main lines at Colton Crossing consist of freight trains of BNSF and UPRR, commuter passenger trains operated by Metrolink (the Southern California commuter rail operations authority), and long-distance passenger trains operated by Amtrak. As described in the Rail Operations Analysis, port traffic contribution to total rail traffic through the Colton Crossing is expected to remain proportional to other rail traffic through Colton Crossing as outlined for existing conditions.

The proposed project would maintain the same number of mainline tracks as existing today. Additionally, the Rail Operations Analysis confirmed that there is adequate capacity of the rail infrastructure within the model limits, for the train characteristics, schedules, and frequencies provided by BNSF, UPRR, Metrolink, and Amtrak, for the train volumes for each of the three analysis years (2010, 2015, and 2035), in both the existing and proposed conditions. Therefore, the growth in train volumes is the same for both the existing and proposed project conditions. As the type and intensity of use proposed for the project site is consistent with the existing pattern and practice of development in the project area, and because the improvements necessary for development of the site would not facilitate growth that has not been anticipated in the project area, no growth-related impacts would occur.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

#### ***b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?***

**No Impact.** The site is currently developed with existing railroad tracks. Construction of the proposed project does not require the demolition of any existing residential use and would not result in the displacement of residents in the area. Since no relocation of residents or construction of replacement housing is required, no impacts to existing housing would occur.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

#### ***c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?***

**No Impact.** Please refer to Checklist Response XIII(b).

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

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### XIV. PUBLIC SERVICES

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*Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*

Response time is the period of time between when a call is received by a dispatcher and the arrival of a fire protection unit or a police patrol car. The response time varies depending upon the nature of the call. Typical calls are prioritized based upon the urgency of the incident. The average emergency call response time for a fire or police unit that includes the subject project site is less than five minutes. Other response times will vary depending on the level of priority in conjunction with the availability of a fire or police unit.

**Fire Protection.** Fire protection services for the project area are provided by the City of Colton Fire Department (CFD) with “mutual aid” services readily available from the San Bernardino County Fire Department. The CFD is responsible for providing fire suppression, emergency medical services, technical rescue, fire prevention, weed abatement, and disaster preparedness services to the City of Colton. These services are provided by four (4) fire stations strategically located throughout the City, which results in average response times of less than six minutes. Fire services are managed through the following three divisions: Operations, Fire Safety, and Disaster Preparedness. The closest CFD fire station to the project site is Fire Station 211 located at 303 East E Street, which is approximately 0.34 mile northeast of the project site (LSA 2010)(CFD 2010).

**Police Protection.** Police protection services to the project area are provided by the City of Colton Police Department (CPD), which receives all calls at the main station located at 650 North La Cadena Drive approximately 0.45 mile north of the project area. The CPD also has a mutual aid agreement with all adjacent cities as a primary resource, and with the County of San Bernardino Sheriff-Coroner Department as a secondary resource. The mission of the CPD is to protect life and property, solve neighborhood problems, and enhance the quality of life in the community.

**Other Protective Services.** The California Highway Patrol (CHP) has jurisdiction on freeways in California, including I-10. The nearest CHP office to the project site is located at 2211 Western Avenue in San Bernardino, approximately 35 miles northeast of the project area. This facility is the west San Bernardino Valley office that serves the Cities of Colton, Fontana, Rialto, San Bernardino, Loma Linda, and the unincorporated communities of Bloomington and Crestmore.

Other law enforcement in the project area includes the UPRR police force. UPRR police officers are commissioned in the states in which the UPRR has right-of-way. Officers also carry federal commissions issued by the USDOT, enabling UPRR officers to conduct intrastate law enforcement operations. The UPRR Police Department is certified by the California Commission on Peace Officers Standards and Training, and officers meet the same standards as any other sworn peace officer. The UPRR Police also respond to reports of hazardous materials accidents along its right-of-way, as well as railroad crossing and personal injury accidents. UPRR Police officers, working with UPRR Hazardous Materials Specialists, assist local agencies during railway spills and accidents, providing critical liaison between the railroad, shipping company

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and local police and fire departments. This group has almost immediate response times to any accidents or activity requiring their services on the project site.

### **a) Fire Protection?**

**Less Than Significant Impact.** The proposed project does not include a residential component and would not contribute to a direct increase in population. Fire protection services are already provided to the proposed project site and surrounding neighborhood. Implementation of the proposed project would not increase the population of the existing service area and would therefore not generate an additional demand for fire protection services. Furthermore, the proposed project would not necessitate any road closures nor would construction of the proposed structure impede any existing circulation routes in the area. Operation of the proposed project would not affect fire protection services.

During construction, incremental delay in the delivery of services may occur on local roadways, including slightly longer fire and police response times. No detours are anticipated for this project except for temporary closures necessary for the construction staging. Temporary lane reductions or closures may occur when barriers are being moved into position, when lanes are being restriped, when falsework is being installed or removed, or when the rail lines are being restored to their completed conditions. These temporary closures would likely be limited to non-peak travel hours, and would not adversely affect accessibility to residential or commercial land uses. The City of Colton and San Bernardino County Fire Departments would be notified of all temporary road closures during the all phases of the construction. Construction of the proposed project would not affect fire protection services.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

### **b) Police Protection?**

**Less Than Significant Impact.** As previously stated, the proposed project does not include a residential component and would not contribute to a direct increase in population. Police protection services are already provided to the proposed project site and surrounding neighborhood. Implementation of the proposed project would not increase the population of the existing service area and would therefore not generate an additional demand for police protection services. In addition, the railroads have their own security staff that monitor the railway and rail facilities. Furthermore, the proposed project would not necessitate any road closures nor would construction of the proposed structure impede any existing circulation routes in the area. Operation of the proposed project would not affect police protection.

As previously noted, during construction incremental delay in the delivery of services may occur on local roadways, including slightly police response times. No detours are anticipated for this project except for temporary closures necessary for the construction staging. Temporary reductions or closures may occur when barriers are being moved into position, when lanes are being restriped, when falsework is being installed or removed, or when the rail lines are being restored to their completed conditions. These temporary closures would likely be limited to non-peak travel hours, and would not adversely affect accessibility to residential or commercial land uses. The City of Colton and San Bernardino County Police/Sheriff Departments would be

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notified of all temporary road closures during the all phases of the construction. Construction of the proposed project would not affect police protection services.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

#### **c) Schools?**

**Less Than Significant Impact.** The proposed project consists of a railway improvement project and will not consist of building residential units that would house school-aged children. It is anticipated that the implementation of the proposed project would not affect schools in the nearby area as the project is a railway improvement and would not generate additional students and would not reduce the level of service at school facilities. Operation of the proposed project would not affect school facilities or activities.

It is anticipated that construction activities and vehicles would not hinder the passage of school buses on local streets as the construction phase of the proposed project would not necessitate any road closures. Intermittent temporary lane closures on La Cadena Drive will be required to construct the new bridge over the roadway. As part of the Transportation Management Plan, discussed in Section XVI, the Colton Unified School District would be notified of any closures. Implementation of the **Measure TRA-1** (page 108) would minimize potential effects on school routes. Potential short term construction impacts on schools are considered less than significant.

### **Avoidance, Minimization and Mitigation Measures**

Implementation of **Measure TRA-1** will minimize potential affects on school routes.

#### **d) Parks?**

**No Impact.** As previously stated, the proposed project does not include a residential component and would not contribute to a direct increase in population. As there is no direct increase in population resulting from the proposed project, no new demand on existing park facilities would occur. Therefore, the proposed project would not affect parks.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

#### **e) Other Public Facilities?**

**No Impact.** As previously stated, the proposed project does not include a residential component and would not contribute to a direct increase in population. As there is no direct increase in population resulting from the proposed project, no new demand on other public facilities such as library or hospital services would occur.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

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### XV. RECREATION

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- a) Increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

**No Impact.** As previously stated, the proposed project does not include a residential component and would not contribute to a direct increase in population. As there is no direct increase in population resulting from the proposed project, no new demand on existing neighborhood or regional park facilities would occur. Therefore, no impacts to recreational facilities would occur with implementation of the Build Alternative.

#### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

- b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical affect on the environment?**

**No Impact.** As previously stated, the proposed project does not include a residential component and would not contribute to a direct increase in population. As there is no direct increase in population resulting from the proposed project, no new demand on existing park facilities would occur. In addition the proposed project is a railway improvement project and does not include a recreational component. Therefore, no impacts to recreational facilities would occur with implementation of the Build Alternative.

#### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

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### XVI. TRANSPORTATION AND TRAFFIC

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Project impacts have been assessed for potential impacts on vehicular traffic and rail traffic. This section is based in part the *Colton Crossing Grade Separation Vehicular Traffic Study* prepared by Iteris and dated February 2011 and the *Rail Operations Analysis* prepared by HDR Engineering, Inc., dated February 2011.

- a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

**Less Than Significant Impact.** During construction, trains would utilize the existing mainline tracks. Once the structure is complete, the tracks will be incrementally moved onto the flyover.

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The southerly mainline track will remain as a connector track between UPRR yards and BNSF Mainlines. The proposed project would result in no temporary disruption of rail traffic and no mitigation is required.

Peak construction vehicle activity was determined to be in year 2012. The traffic study forecast levels of service for the 25 study intersections in peak construction year 2012 and determined that the 9<sup>th</sup> Street/I-10 Eastbound Ramps intersections would operate at an unacceptable level (LOS F). With the addition of project construction traffic, this intersection would further degrade. Implementation of **Measure TRA-2** (page 108) would minimize impacts to this intersection. Additionally, intermittent temporary lane closures on La Cadena Drive would be required to construct the railroad bridge over La Cadena Drive which could affect local access north and south of the I-10 on La Cadena. Implementation of **Measure TRA-1** (page 108) would minimize impacts associated with construction phasing. Potential impacts to local arterials are considered less than significant.

### **Vehicular Traffic**

**No Impact.** The Vehicular Traffic Study studied existing traffic conditions (2010), construction staging (2012) traffic conditions, opening year (2015) traffic conditions, and forecast year (2035) traffic conditions. Impacts from the proposed project during construction and on opening year (2015) and forecast year (2035) traffic conditions were assessed. The traffic study area for the analysis of the proposed project traffic impacts and benefits includes 25 intersections and 5 at-grade rail crossings.

The City of Colton General Plan identifies a minimum intersection level of service standard of Level of Service (LOS E); however, the City is in the process of updating its General Plan, and the level-of-service standard may be revised to LOS D or better for acceptable intersection operations. Consequently, intersections operating at LOS E or F are considered unsatisfactory. This standard is applied to all study intersections, including City intersections as well as joint City/Caltrans intersections where freeway ramps terminate.

#### *Existing Conditions.*

Table 3.16.A identifies existing levels of service at the study intersections.

| Intersection                                     | A.M. Peak Hour |       | P.M. Peak Hour |       |
|--|----------------|-------|----------------|-------|
|  | LOS            | Delay | LOS            | Delay |
| 1. Pennsylvania Avenue/Laurel Street             | C              | 16.1  | A              | 9.9   |
| 2. 8 <sup>th</sup> Street/Laurel Street          | A              | 2.0   | A              | 2.4   |
| 3. La Cadena Drive-Bordwell Avenue/Laurel Street | C              | 31.2  | C              | 29.4  |
| 4. Pennsylvania Avenue/Olive Street              | B              | 14.1  | B              | 10.0  |
| 5. 7 <sup>th</sup> Street/Olive Street           | A              | 3.3   | A              | 2.7   |
| 6. La Cadena Drive/Olive Street                  | B              | 10.7  | B              | 10.3  |
| 7. Pennsylvania Avenue/E Street                  | A              | 3.9   | A              | 2.4   |
| 8. 7 <sup>th</sup> Street/E Street               | A              | 9.0   | A              | 8.4   |
| 9. Pennsylvania Avenue/H Street                  | A              | 10.0  | A              | 4.7   |
| 10. 7 <sup>th</sup> Street/H Street              | B              | 11.1  | A              | 9.5   |
| 11. La Cadena Drive/H Street                     | A              | 9.7   | A              | 9.4   |
| 12. Rancho Avenue/Valley Boulevard               | C              | 34.9  | C              | 31.4  |
| 13. 3 <sup>rd</sup> Street/Valley Boulevard      | C              | 21.6  | B              | 15.8  |

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| Intersection                                       | A.M. Peak Hour |       | P.M. Peak Hour |             |
|--|----------------|-------|----------------|-------------|
|  | LOS            | Delay | LOS            | Delay       |
| 14. Pennsylvania Avenue/Valley Boulevard           | A              | 3.2   | A              | 1.7         |
| 15. 7 <sup>th</sup> Street/Valley Boulevard        | A              | 8.0   | A              | 4.1         |
| 16. La Cadena Drive/Valley Boulevard               | D              | 36.0  | C              | 32.0        |
| 17. 9 <sup>th</sup> Street/Valley Boulevard        | C              | 32.8  | C              | 34.2        |
| 18. Rancho Avenue/I-10 Westbound Ramps             | C              | 20.6  | B              | 18.7        |
| 19. Rancho Avenue/I-10 Eastbound Ramps             | C              | 27.8  | C              | 34.5        |
| 20. 9 <sup>th</sup> Street/I-10 Westbound Off-Ramp | A              | 4.3   | A              | 4.8         |
| 21. 9 <sup>th</sup> Street/I-10 Eastbound Ramps    | C              | 23.6  | <b>E</b>       | <b>45.9</b> |
| 22. 9 <sup>th</sup> Street/L Street                | A              | 7.1   | A              | 7.1         |
| 23. 9 <sup>th</sup> Street/M Street                | A              | 7.8   | A              | 7.9         |
| 24. 9 <sup>th</sup> Street/N Street                | A              | 7.2   | A              | 7.0         |
| 25. 9 <sup>th</sup> Street/O Street                | A              | 7.3   | A              | 7.5         |

As identified in Table 3.16.A, the 9th Street/I-10 Eastbound Ramps intersection is currently operating at an unsatisfactory LOS during the p.m. peak hour.

The traffic study calculated existing gate downtime (hourly average in minutes) at the five crossing ranging from 9.65 minutes per hour to 11.65 minutes per hour.

### *Opening Year 2015 and Opening Year 2035 Impacts.*

The traffic study forecast intersection levels of service for the 25 study area intersections in Opening Year 2015, Opening Year 2015 with Project, Forecast Year 2035, and Forecast Year 2035 with Project conditions. The proposed project does not have a vehicular trip generation component. For this reason, project impacts were identified by determining whether or not the change in gate down times at at-grade rail crossings attributable to the proposed project's affect on rail traffic would in turn cause redistribution of existing/year 2015/year 2035 baseline trips (i.e., without project) to alternative travel routes within the traffic study area (see *Colton Crossing Grade Separation Vehicular Traffic Study*, page 39).

Analysis of potential redistribution was conducted by inputting rail crossing delays from the Rail Traffic Controller (RTC) train dispatching simulation model provided in the Rail Operations Study to SCAG's RTP Travel Demand Model. Based on the modeling results, it was determined that overall gate down time would be reduced in the "with project" conditions for both year 2015 and 2035. In the immediate project vicinity, gate down times were forecast to decrease at the Olive Street crossing and increase slightly at the Valley Boulevard crossing. However, trip redistribution would not occur because the change in delays in the project vicinity will not cause traffic redistribution within the intersection study area. For example, the Opening Year 2015 reduction in delay at the Olive Street crossing is estimated to be approximately 1.4 minutes per train crossing during peak hours while the increase in delay at the Valley Boulevard crossing is estimated to be approximately 0.1 minutes (six seconds) per train during peak hours. These minimal decreases and increases in delay would not cause traffic to divert or redistribute to alternative routes within the traffic study area. Therefore, the Opening Year 2015 and Forecast Year 2035 "with and without" traffic volumes were determined to be the same. Similarly, the Opening Year 2015 and Forecast Year 2035 "with and without" level of service calculations are the same. The proposed project would have no impact on traffic distribution.

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### Rail Traffic

**Less Than Significant Impact.** The rail operations study quantifies rail operations outcomes resulting from the proposed project. The rail operations study used the RTC model, mentioned previously, to measure changes in train operations. The RTC model was used because it is widely used, understood, and it accurately measures all of the desired rail operations outcomes in the study.

The rail operations study assessed rail operations outcomes for existing rail traffic conditions (2010), opening year (2015) rail traffic conditions, and forecast year (2035) rail traffic conditions. Impacts from the proposed project on opening year and forecast year rail traffic conditions were assessed.

The rail study area for the analysis of the proposed project rail impacts and benefits included all at-grade road/rail crossings located along the following rail segments:

- BNSF Cajon Subdivision: Summit (Cajon Pass) to San Bernardino.
- BNSF San Bernardino Subdivision: San Bernardino to Riverside.
- UPRR Yuma Subdivision: Beaumont to West Colton.
- UPRR Alhambra Subdivision: West Colton to Pomona.
- UPRR Los Angeles Subdivision: Riverside to Pomona.

**Future Train Volumes.** Growth in train volumes within the modeling area is projected to occur in the future (both 2015 and 2035). Projected future train volumes are shown in Table 1.1.A and were developed using growth rates provided by the UPRR and BNSF. Future train volume growth rates and the effect of the Ports of Los Angeles and Long Beach on these growth rates are described below.

*Freight train volume growth.* BNSF and UPRR expect freight train traffic through Colton Crossing to grow at a 2.71 percent annual rate, compounded, from the present through 2035. (Train volume fluctuations around this average may occur on a weekly, seasonal, and yearly basis as a result of general economic conditions, changes in market demands for products carried by trains, and other conditions.) BNSF and UPRR provided this consensus compound annual growth rate (CAGR) for freight trains based on historic trends and economic growth predictions supplied by the firm Global Insights, Inc. According to UPRR and BNSF, the CAGR for the 20-year period covering 1989–2008 equaled 3.08 percent. The CAGR for the 10-year period covering 1999–2008 equaled 2.28 percent. An annual growth rate equaling 2.71 percent is justified due to the following factors:

- Projected growth rate falls in line with intermediate and long-term car loading trends;
- Positive prospects for freight rail going forward;
- Environmentally friendly mode of transportation;
- Conversion of truck freight to rail as a result of overall highway congestion;
- Recovery of overall economy; and
- Above average population growth projections for Southern California.

*Port traffic growth.* As described above, movement of goods between the Los Angeles and Long Beach Ports and domestic shippers and receivers represents approximately 28 percent of existing

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trains moving through the Colton Crossing. Port traffic contribution to total rail traffic through Colton Crossing is expected to remain proportional to other rail traffic through Colton Crossing. This assumption is documented by port and modal elasticity studies conducted by Leachman and Associates and the University of California, Berkeley for the Southern California Association of Governments (SCAG) in 2005 and was recently updated (Source: Port and Modal Elasticity Study, Phase II). These studies measured elasticity of demand for import and export containerized goods traffic through the ports compared to alternative ports serving the same inland U.S. markets.

*Existing Conditions.* Between 70 and 90 freight trains per day travel through the crossing at present (measured during the period of July 25 to August 3, 2010). The approximate proportion of each train type at present per day is as follows:

- **5% bulk trains:** Most of these trains deliver commodities to receivers within the Los Angeles Basin.
- **5% local trains:** These trains primarily move freight brought to Los Angeles Basin switching yards by manifest trains, to local shippers and receivers.
- **20% manifest trains:** These trains primarily move freight that will be delivered to receivers or picked up from shippers that are located in the Los Angeles Basin.
- **70% intermodal trains:** Approximately 60 percent of the freight carried by these trains moves between domestic U.S. shippers and receivers. The remaining 40 percent, equating to 28 percent of the trains, moves between the Ports of Los Angeles and Long Beach, and domestic shippers and receivers.
- Small volumes of traffic originating in or destined to Mexico pass through Colton Crossing.

Table 13.6.B presents existing train volumes.

**Table 13.6.B: Existing and Forecast Train Volumes and Delay<sup>1</sup>**

|  | Existing (2010) | 2015  | 2035  |
|--|-----------------|-------|-------|
| <i>Weekly Train Volume<sup>2</sup></i> |                 |       |       |
| Freight                                | 866             | 987   | 1,680 |
| Passenger                              | 76              | 76    | 76    |
| All                                    | 942             | 1,063 | 1,756 |
| <i>Daily Train Volume<sup>2</sup></i>  |                 |       |       |
| Freight                                | 124             | 141   | 240   |
| Passenger                              | 11              | 11    | 11    |
| All                                    | 135             | 152   | 251   |

<sup>1</sup> Within modeling area.

<sup>2</sup> Total average train volumes include all trains within the model limits. Some of these trains do not pass through Colton Crossing, such as local trains that move between various yards, and trains that travel between UPRR's Mojave Subdivision and Alhambra Subdivision. These trains influence trains that travel through Colton Crossing, thus must be included in the model to provide accurate results.

Source: Rail Operations Analysis, February 2011

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**Train Delay and Train Idling Caused by the Colton Crossing.** Train delay is strongly influenced by the Colton Crossing in the existing conditions. Train delay is expressed in terms of cumulative idling time and cumulative train time within the model limits. Cumulative idling time refers to the total amount of time that trains spend idling within the model area waiting to complete their travel in or through the model area. Idling can occur on mainline tracks, connection tracks or in rail yards within the model area. The cumulative train time within the model limits refers to the total time that a train takes to pass through the model area or reach a destination within the model area. Previously referenced Table 3.16.C illustrates the cumulative idling time, which indicates the level of delay of train movement within the modeling area. For the existing condition, the cumulative idling time within the model area on a weekly basis is 19 days; 8 hours and 23 minutes, which translates to 29.6 minutes per train on average. The train delay is forecast to increase in future conditions without the proposed project as shown in Table 3.16.C. In 2015, cumulative idling time is 30 days, 16 hours and 1 minute on a weekly basis, which translates to 41.5 minutes per train on average. By 2035, the cumulative idling time increases substantially to 522 days, 6 hours and 8 minutes on a weekly basis, which is 428 minutes (or 7 hours and 8 minutes) per train on average. In particular, westbound trains were observed in the rail model to accumulate on the UPRR Yuma Subdivision east of the Colton Crossing, waiting on clearance through the Colton Crossing. During peak periods, as many as five westbound trains were observed to be waiting either on the mainline at the crossing or in the vicinity of crossing in the 2015 condition. This condition would continue in 2035 with the predicted increase in train volumes and cumulative idling time.

**Table 3.16.C: Cumulative Train Idling and Total Train Times in Rail Study Area**

| At-Grade Crossing  | No Project: Existing Infrastructure |          |           | Proposed Project: Future Infrastructure |          |           |
|--|-------------------------------------|----------|-----------|---|----------|-----------|
|  | 2010                                | 2015     | 2035      | 2010                                    | 2015     | 2035      |
| Cumulative Idling Time, all Trains, per week (DD:HH:MM)                    | 19:08:23                            | 30:16:01 | 522:06:34 | 02:22:36                                | 04:10:31 | 304:20:30 |
| Cumulative Train Time within Model Limits, all Trains, per week (DD:HH:MM) | 54:08:21                            | 71:18:01 | 642:13:47 | 35:10:28                                | 41:21:09 | 375:01:47 |

<sup>1</sup> Within modeling area

<sup>2</sup> Total average train volumes include *all* trains within the model limits. Some of these trains do not pass through Colton Crossing, such as local trains that move between various yards, and trains that travel between UPRR's Mojave Subdivision and Alhambra Subdivision. These trains influence trains that travel through Colton Crossing, thus must be included in the model to provide accurate results.

Notes: DD = days  
HH = hours  
MM = minutes

Source: Rail Operations Analysis, February 2011.

**Grade-Crossing Occupancy Times.** Additionally, the existing Colton Crossing affects the operation of local arterials where they meet at-grade with the UPRR and BNSF mainlines. Grade-crossing occupancy times were most strongly influenced by the locations where trains staged waiting to cross Colton Crossing or other locations where trains accumulated behind other trains waiting to cross Colton Crossing, in the existing condition. The results shown in Table 3.16.D demonstrate grade-crossing occupancy times.

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**Table 3.16.D: Existing Delay at Arterial Crossings**

| At-Grade Crossing      | No Project:<br>Existing Infrastructure (Trains / HH:MM) |                 |                 | Proposed Project:<br>Future Infrastructure (Trains / HH:MM) |                 |                 |
|------------------------|---|-----------------|-----------------|---|-----------------|-----------------|
|                        | 2010  | 2015            | 2035            | 2010  | 2015            | 2035            |
| 3 <sup>rd</sup> Street | 65 / 02:36  | 76 / 03:12      | 140 / 05:41     | 65 / 02:31  | 76 / 03:00      | 141 / 05:20     |
| Alessandro Road        | 40 / 02:25  | 49 / 03:00      | 98 / 05:54      | 40 / 02:25  | 49 / 02:58      | 98 / 05:50      |
| Archibald Avenue       | 18 / 00:34  | 22 / 00:43      | 47 / 01:24      | 18 / 00:34  | 22 / 00:43      | 48 / 01:24      |
| Beaumont Avenue        | 40 / 02:34  | 49 / 03:38      | 98 / 09:30      | 40 / 02:27  | 49 / 03:07      | 98 / 08:08      |
| Bellegrave Avenue      | 19 / 00:37  | 23 / 00:46      | 48 / 01:41      | 19 / 00:37  | 23 / 00:46      | 49 / 01:42      |
| Bon View Avenue        | 18 / 00:47  | 22 / 00:59      | 47 / 01:53      | 18 / 00:47  | 22 / 01:00      | 48 / 01:54      |
| Brockton Avenue        | 17 / 00:49  | 22 / 01:04      | 47 / 02:22      | 17 / 00:48  | 22 / 01:00      | 47 / 02:14      |
| Campus Avenue          | 48 / 01:48  | 59 / 02:15      | 120 / 04:03     | 48 / 01:48  | 59 / 02:15      | 120 / 04:04     |
| Center Street          | 65 / 02:55  | 76 / 03:30      | 140 / 06:02     | 65 / 02:50  | 76 / 03:23      | 141 / 05:50     |
| Chicago Avenue         | 65 / 02:38  | 76 / 03:14      | 140 / 05:41     | 65 / 02:33  | 76 / 03:00      | 141 / 05:18     |
| Clay Street            | 18 / 00:40  | 22 / 00:49      | 47 / 01:54      | 18 / 00:39  | 22 / 00:49      | 48 / 01:54      |
| Cridge Street          | 48 / 02:04  | 55 / 02:22      | 94 / 04:05      | 48 / 01:56  | 55 / 02:12      | 94 / 03:49      |
| Cridge Street (BNSF)   | 48 / 02:04  | 55 / 02:22      | 94 / 04:05      | 48 / 01:56  | 55 / 02:12      | 94 / 03:49      |
| E Street               | 52 / 02:52  | Closure         | Closure         | 52 / 02:57  | Closure         | Closure         |
| Francis Avenue         | 18 / 00:34  | 22 / 00:43      | 47 / 01:26      | 18 / 00:35  | 22 / 00:44      | 48 / 01:27      |
| H Street               | 52 / 02:49  | Closure         | Closure         | 52 / 02:54  | Closure         | Closure         |
| Hamilton Boulevard     | 33 / 01:33  | 39 / 01:52      | 72 / 03:07      | 33 / 01:34  | 39 / 01:52      | 72 / 03:08      |
| Hunts Lane             | 40 / 02:05  | Grade Separated | Grade Separated | 40 / 02:09  | Grade Separated | Grade Separated |
| Iowa Avenue            | 65 / 02:52  | Grade Separated | Grade Separated | 65 / 02:47  | Grade Separated | Grade Separated |
| Jurupa Road            | 19 / 00:37  | 23 / 00:46      | 48 / 01:50      | 19 / 00:37  | 23 / 00:46      | 49 / 01:51      |
| Laurel Street          | 50 / 03:14  | Grade Separated | Grade Separated | 50 / 03:04  | Grade Separated | Grade Separated |
| Live Oak Canyon        | 40 / 02:46  | 49 / 03:36      | 98 / 07:35      | 40 / 02:48  | 49 / 03:31      | 98 / 07:24      |
| Magnolia Avenue        | 17 / 00:50  | Grade Separated | Grade Separated | 17 / 00:48  | Grade Separated | Grade Separated |
| Main Street            | 41 / 01:42  | 47 / 01:58      | 83 / 02:58      | 41 / 01:41  | 47 / 01:56      | 83 / 02:56      |
| Main Street (BNSF)     | 65 / 06:14  | 76 / 06:39      | 140 / 08:29     | 65 / 06:08  | 77 / 06:35      | 141 / 08:24     |
| N Milliken Avenue      | 31 / 01:00  | Grade Separated | Grade Separated | 31 / 01:01  | Grade Separated | Grade Separated |
| S Milliken Avenue      | 18 / 00:35  | Grade Separated | Grade Separated | 18 / 00:35  | Grade Separated | Grade Separated |

## Chapter 3 – CEQA CHECKLIST RESPONSES

**Table 3.16.D: Existing Delay at Arterial Crossings**

| At-Grade Crossing                          | No Project:<br>Existing Infrastructure (Trains / HH:MM) |                 |                 | Proposed Project:<br>Future Infrastructure (Trains / HH:MM) |                 |                 |
|--|---|-----------------|-----------------|---|-----------------|-----------------|
|  | 2010  | 2015            | 2035            | 2010  | 2015            | 2035            |
| Mission Inn Avenue                         | 65 / 02:38  | 76 / 03:12      | 140 / 05:41     | 65 / 02:33  | 76 / 03:02      | 141 / 05:24     |
| Monte Vista Avenue                         | 41 / 01:26  | 47 / 01:40      | 82 / 02:34      | 41 / 01:26  | 47 / 01:40      | 82 / 02:34      |
| N. San Antonio Avenue                      | 41 / 01:27  | 47 / 01:41      | 83 / 02:34      | 41 / 01:27  | 47 / 01:40      | 83 / 02:33      |
| Olive Street                               | 52 / 02:52  | 59 / 04:39      | 98 / 07:12      | 52 / 02:53  | 59 / 03:19      | 98 / 05:07      |
| Palm Avenue (UP)                           | 17 / 00:49  | 22 / 01:07      | 47 / 02:30      | 17 / 00:47  | 22 / 00:59      | 47 / 02:12      |
| Palmyrita Avenue                           | 65 / 02:49  | 76 / 03:26      | 140 / 06:07     | 65 / 02:43  | 76 / 03:14      | 141 / 05:46     |
| Palomares Street                           | 31 / 01:10  | 37 / 01:24      | 73 / 02:20      | 31 / 01:09  | 37 / 01:23      | 72 / 02:17      |
| Panorama Road                              | 17 / 00:54  | 21 / 01:09      | 46 / 02:18      | 17 / 00:53  | 22 / 01:06      | 47 / 02:12      |
| Park Avenue                                | 41 / 01:49  | 47 / 02:07      | 83 / 03:18      | 41 / 01:49  | 47 / 02:06      | 83 / 03:17      |
| Rialto Avenue                              | 39 / 02:21  | 46 / 02:44      | 84 / 04:34      | 39 / 02:23  | 46 / 02:46      | 85 / 04:36      |
| Riverside Avenue                           | 17 / 00:50  | Grade Separated | Grade Separated | 17 / 00:49  | Grade Separated | Grade Separated |
| Rutile Avenue                              | 19 / 00:37  | 23 / 00:46      | 48 / 01:42      | 19 / 00:37  | 23 / 00:46      | 49 / 01:43      |
| S San Antonio                              | 18 / 00:44  | 22 / 00:55      | 47 / 01:46      | 18 / 00:45  | 22 / 00:56      | 48 / 01:47      |
| San Timoteo Road                           | 40 / 02:35  | 49 / 04:32      | 98 / 15:12      | 40 / 02:09  | 49 / 02:35      | 98 / 08:41      |
| Spruce Street                              | 65 / 02:34  | 76 / 03:10      | 140 / 05:36     | 65 / 02:28  | 76 / 02:56      | 141 / 05:12     |
| Streeter Avenue                            | 17 / 00:48  | Grade Separated | Grade Separated | 17 / 00:46  | Grade Separated | Grade Separated |
| Sultan Avenue                              | 48 / 01:50  | 59 / 02:18      | 120 / 04:15     | 48 / 01:50  | 59 / 02:18      | 120 / 04:15     |
| Valley Boulevard                           | 52 / 02:47  | 58 / 03:12      | 97 / 05:00      | 52 / 02:53  | 58 / 03:18      | 97 / 05:10      |
| Veile Avenue                               | 39 / 02:00  | 48 / 02:25      | 98 / 04:45      | 39 / 01:58  | 48 / 02:23      | 98 / 04:42      |
| Vine Avenue                                | 18 / 00:45  | 22 / 00:57      | 47 / 01:49      | 18 / 00:46  | 22 / 00:57      | 48 / 01:50      |
| Vineyard Avenue (AL)                       | 31 / 01:01  | Grade Separated | Grade Separated | 31 / 01:01  | Grade Separated | Grade Separated |
| Vineyard Avenue (LA)                       | 18 / 00:36  | 22 / 00:46      | 47 / 01:30      | 18 / 00:36  | 22 / 00:46      | 48 / 01:30      |
| Walnut Street                              | 37 / 02:15  | 43 / 02:37      | 80 / 04:29      | 37 / 02:15  | 44 / 02:37      | 82 / 04:29      |
| Whittier Avenue                            | 40 / 02:09  | 49 / 02:42      | 98 / 06:45      | 40 / 02:01  | 49 / 02:32      | 98 / 06:20      |
| Total occupancy for all crossings per week | 1922 / 92:31  | 2274 / 91:18    | 3448 / 172:01   | 1922 / 90:53  | 2279 / 85:34    | 4331 / 158:28   |

## Chapter 3 – CEQA CHECKLIST RESPONSES

**Table 3.16.D: Existing Delay at Arterial Crossings**

| At-Grade Crossing | No Project:<br>Existing Infrastructure (Trains / HH:MM) |      |      | Proposed Project:<br>Future Infrastructure (Trains / HH:MM) |      |      |
|-------------------|---|------|------|---|------|------|
|                   | 2010  | 2015 | 2035 | 2010  | 2015 | 2035 |

<sup>1</sup> Within modeling area

<sup>2</sup> Total average train volumes include *all* trains within the model limits. Some of these trains do not pass through Colton Crossing, such as local trains that move between various yards, and trains that travel between UPRR's Mojave Subdivision and Alhambra Subdivision. These trains influence trains that travel through Colton Crossing, thus must be included in the model to provide accurate results.

Notes: HH = hours  
MM = minutes

Source: Rail Operations Analysis, February 2011.

### *Opening Year 2015 Impacts.*

Total rail delay in Opening Year 2015 for the at-grade rail crossings within the rail study limits were calculated and summarized in previously referenced Table 3.16.B. As shown in the table by comparing the Opening Year 2015 No Project and Opening Year 2015 Proposed Project columns, average daily train delays would be reduced at the vast majority of at-grade crossings with the proposed project.

The proposed project will result in reductions in cumulative idling and cumulative train times in Year 2015 as shown in Table 3.16.C. Cumulative idling times are reduced from 30 days, 16 hours, and 1 minute in the no project alternative to 4 days, 10 hours, and 31 minutes in the proposed project scenario alternative. This represents an 86 percent reduction in cumulative idling times. Similarly, cumulative total train times are reduced from 71 days, 18 hours, and 1 minute in the no project alternative to 41 days, 21 hours, and 9 minutes in the proposed project alternative. This represents a 42 percent reduction in cumulative total train times. Consequently, the proposed project produces a positive benefit in rail operations.

### *Forecast Year 2035 Impacts.*

The proposed project alternative will result in substantial reductions in cumulative idling and cumulative train times in Year 2035 as shown in Table 3.16.C. Cumulative idling times are reduced from 522 days, 6 hours, and 34 minutes under the no project alternative to 304 days, 20 hours, and 30 minutes under the proposed project. This represents a 42 percent reduction in cumulative idling times. Similarly, cumulative total train times are reduced from 642 days, 13 hours, and 47 minutes under the no project alternative to 375 days, 1 hour, and 47 minutes under the proposed project alternative. This represents a 42 percent reduction in cumulative total train times. Consequently, the proposed project produces a positive benefit in rail operations.

Total rail delay in Forecast Year 2035 for the at-grade rail crossings within the rail study limits were calculated and summarized in previously referenced Table 3.16.D. As shown in the table by comparing the Forecast Year 2035 No Project and Forecast Year 2035 Proposed Project columns, average daily train delays would be reduced at the vast majority of at-grade crossings with the proposed project.

### **Avoidance, Minimization and/or Mitigation Measures**

The following measures shall be implemented during construction activities to avoid or minimize potential adverse impacts on transportation and traffic.

## Chapter 3 – CEQA CHECKLIST RESPONSES

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**TRA-1** Transportation Management Plan (TMP) will be prepared for the construction phases of the project. The objectives of a TMP are to maintain the safe movement of vehicles through the construction zone and to provide for the highest level of traffic circulation and access during the construction period. During construction, some traffic delays are anticipated. The TMP will include detailed information on measures taken for off-peak or nighttime work; flagging, lane, shoulder, street, ramp, or total facility closures; project phasing; temporary traffic screens; and details regarding the Construction Progress Schedule and delay penalties. The TMP will be prepared by the contractor prior to construction and will consist of but not be limited to the following elements to mitigate traffic inconvenience caused by construction activities:

- Coordination and communication among all affected local agencies that provide services within the project study area, including but not limited to City of Colton Public Works Department, Colton Police Department, Colton Fire Department, Omnitrans, and utility providers.
- Traffic Control: This project will require traffic control elements such as lane/shoulder closures and temporary signing/stripping on City streets.
- Public Awareness Campaign (PAC): Although the majority of any major roadway closures will occur at night, vehicles traveling through the construction zone will likely experience longer than normal delays. To reduce these delays and confusion to the motoring public during construction activities, the City UPRR will implement a PAC. The purpose of the PAC is to keep the surrounding community abreast of the project's progress and construction activities that could affect travel plans. The use of brochures and mailers, hand-delivering notices to the vicinity, providing a telephone hotline, posting informational signs, local cable television and news advertising, media releases, opportunities to field questions on the project through internet and e-mail, notifications to targeted groups regarding revised transit schedules/maps, rideshare organizations, schools, and organizations representing people with disabilities, commercial traffic reporters/feeds, and public meetings, as appropriate, are effective tools for disseminating this information.
- Signing: Information signing in the form of existing electronic message signs, changeable message signs, ground-mounted/fabric signs, and panel signs will be posted on Mount Vernon Avenue, La Cadena Drive, and Rancho Avenue and the local roadways south of and nearest to the railroad tracks prior to and during construction to inform motorists of delays, ramp closures, and alternate travel routes.

**TRA-2** During the PS&E phase, identify the temporary conversion of the 9th Street/I-10 Eastbound Ramps intersection from one-way stop control to all-way stop control within the project plans and specifications approved by UPRR. The contractor will complete the temporary conversion. At the conclusion of project construction, the City in consultation with Caltrans will determine whether or not the additional traffic controls should be removed or remain in place. If it is determined that the intersection shall be converted back to one-way stop control, the contractor shall complete the conversion.

**b) Conflict with an applicable congestion management program, including not limited to a level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

**No Impact.** As identified in the Checklist Response XVI(a), the proposed project will have no impact on traffic volumes and associated levels of service in the Opening Year 2015 and Forecast Year 2035 scenarios. Consequently, the proposed project would have no impact on the roads included in the San Bernardino County Congestion Management Program.

**Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

**No Impact.** The proposed project would not alter air traffic patterns, would not create hazards from changing the location of an airport, and would not result in the placement of populations in an air traffic safety area. No impact to air traffic would occur with the proposed project.

**Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

**Less Than Significant Impact.** The proposed project would not alter existing roadways and would not introduce incompatible uses to the project vicinity. The project would be designed consistent with federal, State and AREMA standards.

**Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**e) Result in inadequate emergency access?**

**Less Than Significant Impact.** As identified in the Checklist Response XVI(d), operation of the proposed project would not alter existing roadways and will not alter existing emergency routes and access, resulting in no impact.

La Cadena Drive is a major arterial in the City, and all major arterials and freeways are identified in the City's Safety Element as emergency escape routes (see Safety Element, page 7-7). Construction activities would require intermittent temporary lane closures on La Cadena Drive, which could affect emergency vehicles that utilize La Cadena Drive. Implementation of **Measure TRA-1** and **TRA-2** (page 108) would minimize impacts from construction vehicles and equipment to less than significant. Similarly, implementation of these measures would ensure that adequate access is provided at all time during project construction, reducing impacts to less than significant.

## Chapter 3 – CEQA CHECKLIST REPONSES

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### Avoidance, Minimization and Mitigation Measures

Implementation of **TRA-1** and **TRA-2** will minimize impacts from construction vehicles and equipment from the proposed project on area roadways.

**f) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle lanes, sidewalks, etc.)?**

**No Impact.** As identified in the Checklist Response XVI(d), the proposed project would not alter existing roadways. Existing transit stops, bicycle lanes, sidewalks, and other pedestrian routes will be maintained at current levels. The proposed project would not affect policies, plans or programs supporting alternative transportation.

### Avoidance, Minimization and Mitigation Measures

No mitigation is required.

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## XVII. UTILITIES AND SERVICE SYSTEMS

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**a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?**

**No Impact.** The proposed project involves the construction of a railroad flyover and related structures and improvements; it will not construct or induce new housing, businesses, or industries onto the site or into the area and would not generate demand for wastewater treatment. Therefore, it will have no influence on the generation, collection, transport, or treatment of wastewater within the Santa Ana Region of the Regional Water Quality Control Board.

### Avoidance, Minimization and Mitigation Measures

No mitigation is required.

**b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

**Less Than Significant Impact.** As stated in Response XVII(a), the proposed project will not construct any new housing or businesses that would consume more water or generate more wastewater, and so would not require new water or wastewater treatment facilities or the expansion of any existing facilities. The proposed project would not require the construction or new or expansion of existing water or wastewater facilities.

### Avoidance, Minimization and Mitigation Measures

No mitigation is required.

## Chapter 3 – CEQA CHECKLIST REPONSES

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**c) *Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?***

**Less Than Significant Impact.** The proposed project site includes the replacement of existing stormwater drainage facilities within the project study area. The existing facilities within the project area are currently undersized to convey the existing and projected flows. The proposed drainage features would be constructed within the project area and would not result in significant environmental effects. Additionally, these drainage facilities would be designed as to not increase the volume or velocity of flows downstream of the project site. In addition, the project will incorporate one or more retention structures to assure that runoff volumes offsite do not increase as a result of the project. These modifications and improvements will be coordinated with the City and the County, and are expected to be minor and would not in themselves create any significant impacts. Therefore, the proposed project would have less than significant impacts on stormwater drainage facilities.

**Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**d) *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?***

**No Impact.** As stated in Checklist Response XVII(a), the proposed project will not construct any new housing or businesses that would consume more water, and so would not require new water treatment facilities, or expansion of any existing facilities. Therefore, the proposed project would have no effect on water supplies.

**Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**e) *Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?***

**No Impact.** As stated Checklist Response XVII(a), the proposed project will not construct any new housing or businesses that would generate more wastewater, and so would not require new wastewater treatment facilities, or expansion of any existing facilities. Therefore, the proposed project would have no impacts on wastewater treatment.

**Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

**f) *Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?***

**Less Than Significant Impact.** As stated in Checklist Response XVII(a), the proposed project will not construct any new housing or businesses that would generate more solid waste on an ongoing basis, and so it would not require expanded or new landfill facilities. Construction of the proposed project will generate refuse and waste (e.g., wood for cement forms, bags, remnant concrete, etc). However, this amount of waste will be minimized to the degree practical, and will

## Chapter 3 – CEQA CHECKLIST REPONSES

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not cause any capacity limitations at local waste transfer or landfill facilities. The County of San Bernardino, Solid Waste Management Division, manages the disposal of solid waste for the project area, and local wastes are disposed of in the nearby Colton Sanitary Landfill (SWIS #36-AA-0051). The County recently expanded the total capacity of this facility from 13.5 to 15.5 million cubic yards, which extended its useful life from 2009 to 2017 (SBC-SWMD website 2010). Therefore, the proposed project would have less than significant landfill impacts since there is adequate capacity at the Colton Landfill and no mitigation is required.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

#### **g) Comply with federal, state, and local statutes and regulations related to solid waste?**

**Less Than Significant Impact.** The proposed project will be required to comply with all applicable regulations regarding solid waste during construction, and will not generate solid waste during its operational activities. Therefore, the proposed project would have less than significant impacts on solid waste regulations.

### **Avoidance, Minimization and Mitigation Measures**

No mitigation is required.

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## XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

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#### **a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

**Less Than Significant Impact with Mitigation.** Due the absence of biological resources within the project area, development of the proposed project would not cause a fish or wildlife population to drop below self-sustaining levels or restrict the movement/distribution of a rare or endangered species. The proposed project would not impact any threatened or endangered species or habitat as the project site and surrounding area have been previously and substantially disturbed. Although there is suitable habitat (soils and vegetation) for the Delhi sands flower-loving fly (DSF) adjacent to the project site, implementation of the **Measure BIO-01** (page 48) would avoid impacts to the DSF habitat. There are no known unique ethnic or cultural values associated with the site, nor are there any religious or sacred uses associated with the project site. However, the project has the potential to contain buried, as of yet undetected archaeological or paleontological resources. **Measures CUL-1, CUL-2, CUL-4, and PAL-1** (pages 53, 55-56) have been identified to avoid and/or minimize potential impacts associated with the discovery of any undetected cultural and/or paleontological resources identified during construction operations. **Mitigation Measure CUL-3** (page 53) will mitigate substantial adverse change to the significance of an archaeological resource by establishing an Environmentally Sensitive Areas (ESAs) to protect any archeological resources during construction. Therefore, impacts to biological, cultural and paleontological resources are considered to be less than significant.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)**

**Less Than Significant Impact.** The analysis within the Initial Study demonstrates that the proposed project would not have any individually limited, but cumulatively considerable impacts. Any potential impacts identified in the Initial Study would be reduced to a less than significant level through the implementation of avoidance, minimization and/or mitigation measures or adherence to established City, regional, state and federally mandated design and construction standards. Based on the nature of the project, the existing condition of resources in the project area, and the technical studies prepared for this Initial Study, the proposed project would contribute to any cumulative environmental impacts and therefore no important environmental resources would be at risk as a result of project implementation.

- b) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?**

**Less Than Significant with Mitigation.** As identified in the Initial Study, the proposed project would result in a positive effect within the project area through the reduction of air pollutant emissions and reduced noise and vibration associated with rail activities. While a number of the project impacts were identified as having a potential to significantly impact humans, adherence to standard requirements along with implementation of the identified minimization, avoidance and mitigation measures **AES-1** through **AES-3** (pages 31-32 and 34), **AQU-1** through **AQU-4** (page 38), **BIO-1** through **BIO-8** (pages 48-51), **CUL-1** through **CUL-4** (pages 53-56), **GEO-1** and **GEO-2** (page 58), **HAZ-1** through **HAZ-5** (pages 69-70), **HYD-1** through **HYD-4** (pages 75 and 79), **NOI-1** (page 88), and **TRA-1** through **TRA-2** (page 108), would either avoid, minimize or reduce these impacts to a less than significant level. When considered within the context of the past, present and reasonably foreseeable projects within the project study area, the cumulative impacts the proposed project are not expected to directly or indirectly cause significant adverse impacts to humans.

### **Avoidance, Minimization and Mitigation Measures**

All avoidance, minimization and/or mitigation measures to reduce impacts have been identified for each resource potentially affected and included in the Environmental Commitments Record (ERC) to ensure compliance.

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Taylor Reynolds, Assistant Project Manager, Peer Review of Technical Studies and  
Environmental Document

Amir Morales, Senior Project Manager, Peer Review of Natural Environment Study and  
Jurisdictional Delineation

### **4.9 PCR Services Corporation**

Heidi Rous CCP, Director Air Quality, Climate & Acoustics Division, Peer Review of Air  
Quality and Noise Assessments

Kyle Kim Ph.D., Senior Scientist, Peer Review of Noise Assessment

Margarita Wuellner, Ph.D., Director of Historic Resources, Peer Review of Historic Property  
Survey Report

Kyle Garcia, Senior Archaeologist, Peer Review of Paleontological Identification  
Report/Paleontological Evaluation Report and Historic Property Survey Report

### **4.10 ENVIRON**

Carol Serlin, RG, Principal, Peer Review of Initial Site Assessment

Bozena Szeremeta, Senior Manager, Peer Review of Initial Site Assessment

## **Chapter 5 – DISTRIBUTION LIST**

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The Initial Study or a Notice of Availability will be distributed to local, and regional agencies; and utility providers affected by the proposed project. In addition, property owners directly affected by the project will also be provided with Notice of Availability of the document.

### ***Federal Agencies***

Veronica Chan  
United States Army Corps of Engineers  
Regulatory Division  
911 Wilshire Boulevard  
Los Angeles, California 90017

Sally Brown  
United States Fish and Wildlife Service  
Carlsbad Field Office  
6010 Hidden Valley Road, Suite 101  
Carlsbad, California 92011

### ***State Agencies***

California Department of Conservation  
Director  
801 K. Street, 24<sup>th</sup> Floor  
Sacramento, California 95814

California Department of Water Resources  
1416 9<sup>th</sup> Street  
Sacramento, California 95814

State of California, Dept. of Fish & Game,  
Region 6  
3602 Inland Empire Boulevard, Suite C-220  
Ontario, California 91764

California Air Resources Board  
1001 I Street  
Sacramento, California 95812

State Water Resources Control Board  
1001 I Street  
Sacramento, California 95814

Native American Heritage Commission  
915 Capitol Mall, Room 364  
Sacramento, California 95814

State Clearinghouse  
Executive Officer  
Office of Planning and Research  
1400 Tenth Street  
Sacramento, California 95814

### ***Regional/County/ Local Agencies***

Southern California Association of  
Governments  
3600 Lime Street, Suite 216  
Riverside, California 92501

Water Quality Control Board  
Santa Ana Region  
3737 Main Street, Suite 500  
Riverside, California 92501

South Coast AQMD  
IGR Coordinator  
21865 E. Copley Drive  
Diamond Bar, California 91765

## Chapter 5 – DISTRIBUTION LIST

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|--|---|--|
| San Bernardino Associated Governments<br>1170 W. 3 <sup>rd</sup> Street, 2 <sup>nd</sup> Floor<br>San Bernardino, California 92410 | County of San Bernardino Department of<br>Public Works-Flood Control District<br>825 East Third Street<br>San Bernardino, California 92415          | San Bernardino County Fire Department<br>Dan Wurl, Fire Chief<br>157 West Fifth Street, 2 <sup>nd</sup> Floor<br>San Bernardino, California 92415-0451 |
| County of San Bernardino<br>Administrative Office<br>385 N. Arrowhead Avenue<br>San Bernardino, California 92415-0120              | San Bernardino County Sheriff's Department<br>Rod Hoops, Sheriff<br>655 East Third Street<br>San Bernardino, California 92415-0061                  | San Bernardino County<br>Department of Public Works<br>825 East Third Street, Room 145<br>San Bernardino, California 92415-0835                        |
| Riverside County Flood Control and Water<br>Conservation District<br>1995 Market Street<br>Riverside, California 92501             | City of Colton<br>Public Works Department<br>650 N La Cadena Drive<br>Colton, California 92324  | City of Colton Fire Department<br>Tom Hendrix, Fire Chief<br>303 East E Street<br>Colton, California 92324   |
| City of Colton<br>Community Development Department<br>650 N La Cadena Drive<br>Colton, California 92324                            | City of Colton Police Department<br>Bob Miller, Chief of Police<br>650 N La Cadena Drive<br>Colton, California 92324                                | Colton Main Library<br>656 9 <sup>th</sup> Street<br>Colton California 92324   |
| Colton Library Luque Branch<br>294 E. O Street<br>Colton, California 92324   | Omnitrans East Valley<br>1700 W. Fifth Street<br>San Bernardino, California 92411   | Rod Foster, City Manager<br>City of Colton<br>650 N. La Cadena Drive<br>Colton, California 92324   |
| Metrolink<br>700 South Flower Street, Suite 2600<br>Los Angeles, California 90017  | Amtrak Oakland Office<br>Jeffrey White, Senior Environmental<br>Coordinator<br>530 Water Street, 5 <sup>th</sup> Floor<br>Oakland, California 94607 |  |

### **State Legislators**

|  |  |
|--|--|
| Hon. Gloria Negrete McLeod, Senator<br>California State Senate, District 32<br>4959 Palo Verde Street, Suite 110B<br>Montclair, California 91763 | Hon. Wilmer Amina Carter, Assembly Member<br>California State Assembly, District 62<br>335 N. Riverside Avenue<br>Rialto, California 92376 |
|--|--|

## **Chapter 5 – DISTRIBUTION LIST**

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### ***Local Elected Officials***

Hon. Josie Gonzales, Supervisor  
San Bernardino County Board of  
Supervisors, District 5  
385 North Arrowhead Avenue, Fifth Floor  
San Bernardino, California 92415-0110

### ***Interested Groups, Organizations, and Individuals***

Morongo Band of Mission Indians  
Michael Contreras, Cultural Heritage  
Project Manager  
12700 Pumarra Road  
Banning, California 92220

Morongo Band of Mission Indians  
Ernest Siva, Tribal Historian/Elder  
9570 Mias Canyon Road  
Banning, California 92220

Pechanga Band of Mission Indians  
Anna Hoover, Cultural Resources Department  
Post Office Box 2183  
Temecula, California 92593

Ramona Band of Cahuilla Mission Indians  
Joseph Hamilton, Chairman  
Post Office Box 391670  
Anza, California 92539

Ramona Band of Cahuilla Mission Indians  
John Gomez  
Post Office Box 391670  
Anza, California 92539

San Manuel Band of Mission Indians  
James Ramos Chairperson  
26569 Community Center Drive  
Highland, California 92346

San Manuel Band of Mission Indians  
Ann Brierty, Policy/Cultural Resources  
Department  
26569 Community Center Drive  
Highland, California 92346

Serrano Nation of Indians  
Goldie Walker  
Post Office Box 343  
Patton, California 92369

Soboba Band of Luiseño Indians  
Joseph Ontiveros, Cultural Resources  
Manager  
Post Office Box 487  
San Jacinto, California 92581

### ***Utilities, Services, and Businesses***

City of Colton Public Utilities Department  
650 N La Cadena Drive  
Colton, California 92324

Riverside Highland Water Company  
12374 Michigan Street  
Grand Terrace, California 92313-5602

Colton Disposal (Republic Services)  
2059 Steel Road  
Colton, California 92324

## Chapter 5 – DISTRIBUTION LIST

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The Gas Company  
Gertman Thomas  
Post Office Box 3003  
Redlands, California 92373

Southern California Edison  
Eastern Division  
Ray Hicks, Division Manager  
1351 Frances Street  
Ontario, California 91761

Verizon California  
1980 Orange Tree Lane, Suite 100  
Redlands, California 92374

Sprint  
KSOPHT0101-Z4300  
6391 Sprint Parkway  
Overland Park, Kansas 66251-4300

Kinder Morgan Corporate Headquarters  
500 Dallas Street, Suite 1000  
Houston, Texas 77002

Charter Communications  
12405 Powerscourt Drive  
St. Louis, Missouri 63131

Time-Warner Cable  
60 Columbus Circle  
New York, New York 10023

AT&T  
208 S Akard Street  
Dallas, Texas 75202

Southern California Gas Company  
P.O. Box C  
Monterey, Park CA. 91756

Sunesys, LLC.  
Western Regional Office  
1325 Pico, Suite 106  
Corona, Ca 92881

Meeks & Daley Water Co.  
31315 Chaney St.  
Lake Elsinore, CA 92530-2743

Comcast:  
3651 Central Ave.  
Riverside, CA. 92506

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## **Appendix A - Title VI Policy Statement**

**DEPARTMENT OF TRANSPORTATION**

OFFICE OF THE DIRECTOR  
P.O. Box 942873, MS-49  
SACRAMENTO, CA 94273-0001  
PHONE (916) 654-5266  
FAX (916) 654-6608  
TTY 711



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Be energy efficient!*

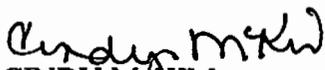
July 20, 2010

**TITLE VI  
POLICY STATEMENT**

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, or age, please visit the following web page:  
[http://www.dot.ca.gov/hq/bep/title\\_vi/t6\\_violated.htm](http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm).

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact Charles Wahnnon, Manager, Title VI and Americans with Disabilities Act Program, California Department of Transportation, 1823 14<sup>th</sup> Street, MS-79, Sacramento, CA 95811. Phone: (916) 324-1353 or toll free 1-866-810-6346 (voice), TTY 711, fax (916) 324-1869, or via email: [charles\\_wahnnon@dot.ca.gov](mailto:charles_wahnnon@dot.ca.gov).

  
CINDY MCKIM  
Director

## **Appendix B- Environmental Commitment Record**

Date:

**ENVIRONMENTAL COMMITMENT RECORD**

**(ECR)**

Colton Crossing Rail to Rail Grade Separation Project

| No.                 | Description of Commitment   | Ref.                       | Responsible Party/Monitor  | Timing/Phase               | Commitment Source | Comments |
|---------------------|---|----------------------------|--|----------------------------|-------------------|----------|
| <p><b>AES-1</b></p> | <p>During the Project Study &amp; Engineering phase, UPRR shall prepare a landscape program that addresses landscape treatment within the Caltrans right-of-way and within residential properties to the south of the UPRR right-of-way.</p> <p>This plan shall include landscape treatment along I-10 between Rancho Avenue and the freeway crossing of the BNSF railroad, within residential properties, and within City of Colton right-of-way to use areas adjacent to the project area for revegetation and it shall include landscaping with plant species compatible with the climatological conditions (e.g., xeric) of the geographic area while still promoting the enhancement of new project structures to the extent feasible. This program shall incorporate all applicable procedures and requirements as detailed in the publication Caltrans Highway Design Manual, Section 902.1, Planting Guidelines (November 2001), and the City of Colton General Plan.</p> <p>The landscape program shall include, but shall not be limited to, the following components, as feasible within Caltrans right-of-way from Rancho Avenue to the BNSF grade separation structure:</p> <ol style="list-style-type: none"> <li>a. Maintain the visual planting character of the I-10 corridor;</li> <li>b. Consider guidance provided in the Interstate 10 Corridor Landscape Master Plan for landscaping;</li> <li>c. Incorporate all applicable procedures and requirements as detailed in the publication Caltrans Highway Design Manual, Section 902.1, Planting Guidelines (November 2001);</li> <li>d. Plant drought-resistant plants within the I-10 right-of-way, which promotes use of xeric (adapted to arid conditions) landscaping techniques; and</li> <li>e. Provide low-maintenance, erosion control groundcover species in the palette to preserve existing views and prevent erosion.</li> </ol> <p>The landscape program shall include the following components, as feasible, within private residential parcels southerly of the UPRR right-of-way from Rancho Avenue to 5th Street and City-owned right-of-way on W. K Street and E. K Street, east of the existing Colton Crossing:</p> <ol style="list-style-type: none"> <li>f. Establish a Tree Planting Program that provides monies to residential property owners and the City of Colton within this area to plant trees within their property to screen views of the flyover structure. The Tree Planting Program shall provide adequate funds to provide for purchase and planting of a selected palette of tree species. Tree species to be included in the selected palette should emphasize drought-tolerant species and native species, but may also contain fruit-bearing trees. Trees within City right-of-way shall be consistent with the adopted City Tree Replacement Palette.</li> </ol> | <p>IS/MND, Section 3.1</p> | <p>UPRR/Resident Engineer/Caltrans Landscape Architect, SANBAG, and City of Colton</p> | <p>During final design</p> | <p>UPRR</p>       |          |
| <p><b>AES-2</b></p> | <p>During final design, the UPRR shall incorporate aesthetic wall treatments into the final design of the proposed project. The selection process for aesthetic wall treatments shall be developed in consultation with the City of Colton and City-designated stakeholders. The selection of aesthetic wall treatments shall be based on the following criteria:</p> <ul style="list-style-type: none"> <li>• Design shall include the application of a variety of textures and patterns to promote visual interest and to deter vandalism. Textures and patterns shall not consist of protruding features or shapes nor shall they include sharp edges; and</li> <li>• Design shall include the application of subtle reliefs at caps and/or parapets to</li> </ul>   | <p>IS/MND, Section 3.1</p> | <p>UPRR/Resident Engineer/Caltrans, City of Colton and SANBAG</p>                      | <p>During final design</p> | <p>UPRR</p>       |          |

Date:

**ENVIRONMENTAL COMMITMENT RECORD****(ECR)**

Colton Crossing Rail to Rail Grade Separation Project

| No.          | Description of Commitment   | Ref.                  | Responsible Party/Monitor                      | Timing/Phase                  | Commitment Source | Comments |
|--------------|---|-----------------------|--|-------------------------------|-------------------|----------|
|              | <p>enhance shadow lines and to promote visual interest. Relief depth of textures and patterns and at caps and/or parapets shall be restricted to a maximum depth of 2 inches thereby facilitating inspection for cracking and structural deficiencies; and</p> <ul style="list-style-type: none"> <li>Design for wall treatments on the north side of the structure shall maintain compatibility with the I-10 Corridor Landscape Master Plan; and</li> <li>Design shall not incorporate bold or bright colors that may interfere with day-to-day railroad operations. To the extent feasible, concrete treatments shall be integral-colored or stained to reduce the frequency of maintenance activities; and</li> <li>Treatments shall be applied by form liner in basic patterns and repetitions so as to facilitate future maintenance and/or replacement; and</li> <li>Design of the treatment and materials used in the treatment shall consider graffiti control and the long-term need to remove graffiti.</li> </ul> |                       |  |                               |                   |          |
| <b>AES-3</b> | During the Project Study & Engineering phase the UPRR will prepare a lighting plan for the I-10/Rancho Avenue ramps prior to construction. The lighting fixtures will be designed consistent with Caltrans lighting standards to minimize glare on adjacent properties and into the night sky. Lighting will be shielded and focused within the ramp right-of-way.  | IS/MND, Section 3.I   | UPRR/Resident Engineer/City of Colton          | During final design           | UPRR              |          |
| <b>AQU-1</b> | During clearing, grading, earthmoving, or excavation operations, excessive fugitive dust emissions will be controlled by regular watering or other dust preventive measures using the following procedures, as specified in the South Coast Air Quality Management District (SCAQMD) Rule 403. All material excavated or graded will be sufficiently watered to prevent excessive amounts of dust. Watering will occur at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. All material transported on site or off site will be either sufficiently watered or securely covered to prevent excessive amounts of dust. The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized so as to prevent excessive amounts of dust. These control techniques will be indicated in project specifications. Visible dust beyond the property line emanating from the project will be prevented to the maximum extent feasible.       | IS/MND, Section 3.III | UPRR/Construction Contractor/SANBAG            | During construction           | SCAQMD            |          |
| <b>AQU-2</b> | Project grading plans will show the duration of construction. Ozone precursor emissions from construction equipment vehicles will be controlled by maintaining equipment engines in good condition and in proper tune per manufacturer's specifications.  | IS/MND, Section 3.III | UPRR/Resident Engineer/Construction Contractor | Prior and during construction | SCAQMD            |          |
| <b>AQU-3</b> | All trucks that are to haul excavated or graded material on site will comply with State Vehicle Code Section 23114, with special attention to Sections 23114(b)(F), (e)(2), and (e)(4), as amended, regarding the prevention of such material spilling onto public streets and roads.   | IS/MND, Section 3.III | UPRR/Resident Engineer/Construction Contractor | During construction           | SCAQMD            |          |
| <b>AQU-4</b> | Contractor will be required to provide evidence to the Resident Engineer or construction manager at the start of work and periodically (at least every 6 months) during construction that the off-road equipment fleet (s) and portable equipment in use comply with applicable State and South Coast AQMD vehicle fleet emission reduction regulations, including a vehicle and equipment inventory indicating appropriate ARB registration or air district permits.   | IS/MND, Section 3.III | UPRR/Resident Engineer/Construction Contractor | During construction           | SCAQMD            |          |
| <b>BIO-1</b> | Prior to initiation of grading activities and staging, the contractor shall install temporary snow fencing along the access roads and grading limits adjacent to identified DSF habitat under the direction of a qualified biologist. This fencing shall be maintained throughout the construction period. If the fencing is damaged for any reason, said fencing shall be replaced within three working days. These fencing areas and requirements shall be shown on project plans and included in the PS&E package approved by UPRR.  | IS/MND, Section 3.IV  | UPRR/Construction Contractor                   | Prior and during construction | NES, USFWS, CDFG  |          |
| <b>BIO-2</b> | In compliance with Executive Order 13112, during construction, invasive species will be removed and controlled within the construction limits. This requirement shall be incorporated   | IS/MND, Section       | UPRR/Resident Engineer/Construction            | During and maintenance        | NES, EO 13112     |          |

Date:

**ENVIRONMENTAL COMMITMENT RECORD**

**(ECR)**

Colton Crossing Rail to Rail Grade Separation Project

| No.          | Description of Commitment   | Ref.                 | Responsible Party/Monitor                             | Timing/Phase                     | Commitment Source                           | Comments |
|--------------|---|----------------------|---|----------------------------------|---|----------|
|              | into the plans and specification approved by UPRR.  | 3.IV                 | Contractor  |                                  |   |          |
| <b>BIO-3</b> | During construction, inspection and cleaning of construction equipment will be performed to minimize the importation of nonnative plant material, and eradication strategies (i.e., weed abatement programs) will be employed should an invasion occur. This requirement shall be incorporated into the plans and specifications approved by UPRR   | IS/MND, Section 3.IV | UPRR/Resident Engineer/Construction Contractor        | Prior to and during construction | NES   |          |
| <b>BIO-4</b> | In compliance with Executive Order 13112, any revegetation, including erosion control, will utilize plant species that prevent the introduction or spread of invasive species, and use of species listed on the California Invasive Plant Council's Invasive Plant Inventory with a high or moderate rating shall be avoided. The plant palette for any revegetation shall be prepared by a licensed landscape architect, consistent with the requirements of EO 13112, and shall be included in the plans and specifications approved by UPRR.   | IS/MND, Section 3.IV | UPRR/Resident Engineer/Construction Contractor/SANBAG | After construction               | NES, EO 13112                               |          |
| <b>BIO-5</b> | <p>Prior to initiating construction, Union Pacific Railroad (UPRR) shall submit a Pre-Construction Notification (PCN) form and Preliminary Jurisdictional Determination to the United States Army Corps of Engineers (USACE) to obtain coverage under a Nationwide Permit (NWP), pursuant to Section 404 of the Federal Clean Water Act (CWA).</p> <p>If compensatory measures are required by the USACE, the appropriate type and level of compensation shall be determined in coordination with the USACE based on the quantity and quality of jurisdictional resources to be affected. Typical compensation could include replacement and/or enhancement of on-site or off-site habitat. An example of compensatory measures would be the payment of in lieu fees or the purchase of established mitigation bank credits for enhancement of some identified USACE jurisdictional area. The specific mitigation bank is subject to approval by the USACE and possibly in coordination with the California Department of Fish and Game (CDFG) and the Santa Ana Regional Water Quality Control Board (RWQCB) under guidelines described by these regulatory agencies through the permitting process. Applicable compensatory measures would be in-lieu fee contribution to County of Riverside Parks and Open Space-Santa Ana River Mitigation Bank or a Santa Ana Watershed Association riparian and wetland restoration/enhancement project.</p> | IS/MND, Section 3.IV | UPRR/Resident Engineer/USACE/CDFG/RWQCB/SANBAG        | Prior to and after construction  | NES, Section 404 of the Federal CWA         |          |
| <b>BIO-6</b> | In the event that a Section 404 authorization or permit is required for the proposed project, UPRR shall submit an application for a 401 Water Quality Certification to the Santa Ana RWQCB and obtain a certification of water quality from the Santa Ana RWQCB prior to initiating construction. In the event that a Section 404 authorization or permit is not required for the proposed project, then prior to initiating construction, UPRR shall submit an application for a State waste discharge permit to the Santa Ana RWQCB for proposed impacts to Waters of the State and obtain appropriate authorization from RWQCB.   | IS/MND, Section 3.IV | UPRR/Resident Engineer/RWQCB/SANBAG                   | Prior to construction            | NES, Section 401 and 404 of the Federal CWA |          |
| <b>BIO-6</b> | In the event that a Section 404 authorization or permit is required for the proposed project, UPRR shall submit an application for a 401 Water Quality Certification to the Santa Ana RWQCB and obtain a certification of water quality from the Santa Ana RWQCB prior to initiating construction. In the event that a Section 404 authorization or permit is not required for the proposed project, then prior to initiating construction, UPRR shall submit an application for a State waste discharge permit to the Santa Ana RWQCB for proposed impacts to Waters of the State and obtain appropriate authorization from RWQCB.   | IS/MND, Section 3.IV | UPRR/Resident Engineer/RWQCB/SANBAG                   | Prior to construction            | NES, Section 401 and 404 of the Federal CWA |          |
| <b>BIO-7</b> | Prior to obtaining initiation of construction, UPRR shall submit a Lake or Streambed Alteration Notification (SAN) to the CDFG for their review. The CDFG may or may not choose to issue a Streambed Alteration Agreement. Notification from the CDFG of either issuance of an Alteration Agreement or determination that it is not required shall be obtained prior to initiating construction.  | IS/MND, Section 3.IV | UPRR/Resident Engineer/CDFG/SANBAG                    | Prior to construction            | NES, Streambed Alteration Agreement         |          |
| <b>BIO-8</b> | All vegetation clearing shall be restricted to outside the active breeding season (February 15 through August 15) for birds whenever possible. If vegetation clearing must occur during breeding season, a qualified biologist shall conduct clearance surveys for active bird nests immediately prior to any clearing of vegetation to ascertain whether any raptors or other migratory birds are actively nesting in the Biological Study Area (BSA). During the clearance  | IS/MND, Section 3.IV | UPRR/Resident Engineer/CDFG/SANBAG                    | During construction              | NES, Migratory Bird Treaty Act              |          |

Date:

**ENVIRONMENTAL COMMITMENT RECORD****(ECR)**

Colton Crossing Rail to Rail Grade Separation Project

| No.           | Description of Commitment   | Ref.                | Responsible Party/Monitor  | Timing/Phase                                | Commitment Source      | Comments |
|---------------|---|---------------------|--|---|------------------------|----------|
|               | surveys, the location of any active bird nests shall be mapped by the biologist, and an appropriate buffer where work shall not take place shall be established and monitored. The buffer shall be delineated by flagging, which shall remain in place until the nest is either abandoned or the young have fledged. If active nests are present, appropriate buffer area shall be determined on a case-by-case basis, depending on nesting species, subject to discussion with the resources agencies when nesting is discovered. This requirement shall be included in the PS&E for the project approved by UPRR.   |                     |  |   |                        |          |
| <b>CUL-1</b>  | An archaeological monitor shall be retained by UPRR and be present during ground disturbing activities within the top four feet of the surface within the APE at the Colton Crossing and eastward. The monitor shall meet the Secretary of Interior Professional Qualifications Standards for historical archaeology. The monitor shall have the authority to temporarily halt or divert construction activities to assess the significance of archaeological finds and consult with the appropriate agency staff. The agency staff and consultant archaeologist will determine the need for salvage excavation, laboratory analysis, curation of materials, and reporting requirements.  | IS/MND, Section 3.V | UPRR/Resident Engineer/Construction Contractor/ SANBAG                                       | During construction                         | UPRR                   |          |
| <b>CUL-2</b>  | If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.   | IS/MND, Section 3.V | UPRR/Resident Engineer/Construction Contractor/ SANBAG                                       | During construction                         | UPRR                   |          |
| <b>CUL -3</b> | An Environmentally Sensitive Area (ESA) will be established for the following seven archaeological sites: 36-022627, 36-022629, 36-022630, 36-022631, 36-022632, 36-022633, and 36-022634. The ESA will consist of an area within and near the limits of construction where access is prohibited or limited for the preservation of each archaeological site. The ESA boundary of each site includes the surface exposure of the site and potential subsurface deposits identified during the remote sensing program, and a buffer of 20 feet. No work shall be conducted within the ESA. All designated ESAs and fencing limits will be shown on final design plans and appropriate fencing requirements included in the PS&E. Fencing will consist of high visibility fencing material and will be 4 feet high. The archaeological monitor who meets the Secretary of Interior Professional Qualifications Standards for historical archaeology, shall monitor the placement of the ESA fencing, inspect the fencing periodically throughout the construction period, order replacement of fencing (if needed) and monitor removal of fencing at the end of construction (see ESA Action Plan in the HPSR, Attachment F). | IS/MND, Section 3.V | UPRR/Resident Engineer/Construction Contractor/ SANBAG                                       | During construction                         | UPRR                   |          |
| <b>CUL-4</b>  | If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to Public Resources Code Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC) who will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact UPRR and Caltrans District 8 Native American Coordinator so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable. This provision shall be included in the contract specifications approved by UPRR.   | IS/MND, Section 3.V | UPRR/Resident Engineer/Construction Contractor/San Bernardino County Coroner's Office/SANBAG | During construction                         | Health and Safety Code |          |
| <b>PAL-1</b>  | A Paleontological Mitigation Plan (PMP) will be prepared by a qualified paleontologist prior to completion of final project design, and the recommendations incorporated into the PS&E approved by UPRR. The PMP will include, but not be limited to, the following: <ul style="list-style-type: none"> <li>A trained paleontological monitor shall be present during ground-disturbing activities within undisturbed sediments determined likely to contain paleontological resources. The monitoring will be conducted on a half-time basis when excavation is occurring in the western portion of the site, the eastern portion of the site, and for bridge footings where excavation exceeds 10 feet in depth. If paleontological resources are</li> </ul>  | IS/MND, Section 3.V | UPRR/Resident Engineer/Construction Contractor   | During final design and during construction | UPRR                   |          |

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| No.          | Description of Commitment  | Ref.                 | Responsible Party/Monitor                              | Timing/Phase        | Commitment Source   | Comments |
|--------------|--|----------------------|--|---------------------|---|----------|
|              | <p>encountered during excavation, the monitoring will increase to full-time.</p> <ul style="list-style-type: none"> <li>• The monitor will be empowered to temporarily halt or redirect construction activities to ensure avoidance of adverse impacts to paleontological resources. The monitor will be equipped to rapidly remove any large fossil specimens encountered during excavation.</li> <li>• If small fossil vertebrate remains are located during the monitoring program, standard samples (12 cubic meters/6,000 lbs) of sediment will be collected and processed to recover microvertebrate fossils. Processing will include wet screen washing and microscopic examination of the residual materials to identify small vertebrate remains.</li> <li>• Upon encountering a large deposit of bone, salvage of all bone in the area will be conducted with additional field staff and in accordance with modern paleontological techniques.</li> <li>• All fossils will be prepared to a reasonable point of identification. Excess sediment or matrix will be removed from the specimens to reduce the bulk and cost of storage. Itemized catalogs of all material collected and identified will be provided to the museum repository along with the specimens.</li> <li>• A report documenting the results of the monitoring and salvage activities and the significance of the fossils will be prepared and submitted to Caltrans and the project team within 60 days of the end of grading or excavation activities.</li> <li>• All fossils collected during this work, along with the itemized inventory of these specimens, will be offered to the San Bernardino County Museum or other appropriate museum repository for permanent curation and storage.</li> </ul> |                      |  |                     |   |          |
| <b>GEO-1</b> | <p>During the Plans, Specifications, and Estimates (PS&amp;E) Phase, the design and construction of the project structures shall comply with the recommendations in the Preliminary Geotechnical Investigation (pages 30–51) prepared for the project (CHJ 2010) and shall be consistent with appropriate UPRR and American Railway Engineering and Maintenance-of-Way Association (AREMA) standards. Additional detailed geotechnical investigations may be conducted by qualified geotechnical personnel as needed to assess geotechnical conditions at specific locations within the project area for the purposes of more specific foundation or construction design. Additional construction requirements or refinements may be incorporated into the final project design as appropriate.</p>  | IS/MND, Section 3.VI | UPRR/Resident Engineer/Construction Contractor/ SANBAG | During final design | Preliminary Geotechnical Investigation, AREMA standards                           |          |
| <b>GEO-2</b> | <p>All of the following requirements shall be included in the final design for the project and so noted on appropriate plans:</p> <ul style="list-style-type: none"> <li>• Structures shall be designed to resist the maximum credible earthquake associated with nearby faults.</li> <li>• Design and construction of the project in accordance with current Federal, State, AREMA, and UPRR standards as applicable, and the California Building Code.</li> </ul>  | IS/MND, Section 3.VI | UPRR/Resident Engineer/ SANBAG                         | During final design | applicable Federal, State, AREMA, and UPRR standards and California Building Code |          |

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|-------|---|------------------------|--|---|----------------------|----------|
| HAZ-1 | During grading, soil excavation shall be monitored by the construction contractor for visible soil staining, odor, and the possible presence of unknown hazardous material sources, such as buried 55-gallon drums and underground tanks. If discolored soils, soils with an unusual odor, or undocumented subsurface structures are encountered during grading, work shall be halted in that area and a qualified environmental professional shall evaluate the situation and recommend the most appropriate course of action (e.g., sampling, remediation, etc). Depending on the type and extent of contaminated materials found onsite, the environmental professional may recommend entering into a Voluntary Cleanup Agreement (VCA) with the California Department of Toxic Substances Control (DTSC) to oversee remediation of the contamination, as appropriate. This requirement shall be included in the contract specifications approved by UPRR.   | IS/MND, Section 3.VIII | UPRR/Resident Engineer/Construction Contractor/ Qualified Environmental Professional/ SANBAG | During construction                         | ISA                  |          |
| HAZ-2 | The prime contractor shall ensure that any soils that shall be disturbed on or adjacent to the project site, and that are suspected of being contaminated by hazardous materials, shall be appropriately tested and/or remediated prior to the start of construction. If contamination is suspected or identified prior to construction activities, an environmental professional shall determine the most appropriate course of action required. This requirement shall be included in the contract specifications approved by UPRR.   | IS/MND, Section 3.VIII | UPRR/Resident Engineer/Construction Contractor/Qualified Environmental Professional/SANBAG   | During final design and during construction | ISA                  |          |
| HAZ-3 | Prior to the start of grading in the general area where "unidentified organic material" was found north of the railroad tracks just southeast of the I-10 freeway and S. 6th Street, soil sampling and testing for hydrocarbons and metals shall be conducted. Backhoe trenching may be needed to fully evaluate the lateral and vertical extent of the material. Any soil found to be contaminated in excess of applicable health standards shall be remediated and disposed of according to applicable regulations. This requirement shall be included in the contract specifications approved by UPRR.   | IS/MND, Section 3.VIII | UPRR/Resident Engineer/Construction Contractor/SANBAG  | During final design and during construction | ISA                  |          |
| HAZ-4 | A licensed contractor shall be retained to properly document, inspect, monitor, and remediate the identified asbestos-containing materials, lead-based paint, and miscellaneous universal wastes, as described in the Preliminary Site Investigation report, dated August 7, 2010. If asbestos-containing materials or lead-based paint are found, they shall be removed and properly disposed of prior to demolition or renovation, in accordance with rules and regulations of the South Coast Air Quality Management Control District and California Department of Toxic Substances Control. This requirement shall be included in the contract specifications approved by UPRR.   | IS/MND, Section 3.VIII | UPRR/Resident Engineer/Construction Contractor/ SANBAG                                       | During final design and during construction | ISA, SCAQMD, DTSC    |          |
| HAZ-5 | If dewatering is required during grading or construction, the onsite water shall be tested to assure it does not exceed any established health standards for heavy metals, organic materials, or other contaminants. Water removed from construction areas that is contaminated shall be disposed of by a licensed contractor in an approved landfill according to applicable regulations. This requirement shall be included in the contract specifications approved by UPRR.  | IS/MND, Section 3.VIII | UPRR/Resident Engineer/Construction Contractor/ SANBAG                                       | During final design                         | ISA                  |          |
| HDY-1 | During construction, the Union Pacific Railroad (UPRR) shall comply with the provisions of the <i>General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities</i> (Construction General Permit) (Order No. 2009-0009-DWQ, NPDES No. CAS000002), and any subsequent permit, as they relate to construction activities for the project. This shall include submission of the Permit Registration Documents, including a Notice of Intent (NOI), risk assessment, site map, Storm Water Pollution Prevention Plan (SWPPP), annual fee, and signed certification statement to the State Water Resources Control Board (SWRCB) via the Storm Water Multi-Application and Report Tracking System (SMARTS) at least 7 days prior to the start of construction. Construction activities shall not commence until a Waste Discharger Identification (WDID) number is received from the SMARTS. The SWPPP shall be prepared by a Qualified SWPPP Developer (QSD) and shall meet the requirements of the Construction General Permit and shall identify potential | IS/MND, Section 3.IX   | UPRR/Resident Engineer/Construction Contractor/ SANBAG                                       | Prior to and during construction            | NPDES General Permit |          |

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|---------------------|---|------------------------------|--|---|-------------------------|----------|
|                     | <p>pollutant sources associated with construction activities; identify non-storm water discharges; develop a water quality monitoring and sampling plan; and identify, implement, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants associated with the construction site. BMPs shall include, but not be limited to, Good Housekeeping, Erosion Control, and Sediment Control BMPs. The BMPs identified in the SWPPP shall be implemented during project construction. UPRR will comply with the Risk Level 2 sampling and reporting requirements of the Construction General Permit. A Rain Event Action Plan (REAP) will be prepared and implemented by a Qualified SWPPP Developer (QSP) within 48 hours prior to a rain event of 50% or greater probability of precipitation according to the National Oceanic and Atmospheric Administration (NOAA). A Notice of Termination (NOT) shall be submitted to the SWRCB within 90 days of completion of construction and stabilization of the site.</p>  |                              |  |   |                         |          |
| <p><b>HDY-2</b></p> | <p>During final design, UPRR shall prepare a Final Water Quality Management Plan (WQMP) that details the Source Control, Site Design, and Treatment Control BMPs to be incorporated into the proposed project. The BMPs shall be consistent with the San Bernardino County Stormwater Program <i>Model Water Quality Management Plan Guidance and Water Quality Management Plan Template</i> and shall be properly designed, installed, and maintained to target pollutants of concern. The WQMP shall be submitted to the City of Colton and County of San Bernardino for review and approval.</p>   | <p>IS/MND, Section 3.IX</p>  | <p>UPRR/Resident Engineer/<br/>SANBAG</p>                    | <p>During final design</p>                                | <p>Municipal permit</p> |          |
| <p><b>HDY-3</b></p> | <p>The 11<sup>th</sup> Street culvert shall be designed during the Plans, Specifications, and Estimates (PS&amp;E) phase such that the size of the additional or replacement culvert(s) shall result in no increases in the Base Flood Elevation. During PS&amp;E, the effect of the proposed project on the Base Flood Elevation shall be confirmed as part of the Final Hydrology and Hydraulics Report prepared during this phase such that no impact to Base Flood Elevations occurs from the proposed project. The Final Hydrology and Hydraulics Report shall be prepared by a qualified registered professional engineer and shall be approved by UPRR.</p>  | <p>IS/MND, Section 3.IX</p>  | <p>UPRR/Resident Engineer</p>                                | <p>During final design, construction, and maintenance</p> | <p>SBCFCD, FEMA</p>     |          |
| <p><b>HDY-4</b></p> | <p>A No Rise Certification for the 11<sup>th</sup> Street Storm Drain shall be included as part of the Final Hydrology and Hydraulics Report, and shall be submitted to the City of Colton for review and approval, prior to completion of the Report.</p>  | <p>IS/MND, Section 3.IX</p>  | <p>UPRR/Resident Engineer</p>                                | <p>During final design, construction, and maintenance</p> | <p>SBCFCD, FEMA</p>     |          |
| <p><b>NOI-1</b></p> | <p>Development of a Noise Control Plan by the contractor will be included in the project specifications approved by UPRR. The contractor will be required to have a qualified acoustical professional develop a Noise Control Plan that demonstrates how the contractor will achieve the noise limits in Table 3.12.D. The plan will include measurements of existing noise, a list of the major pieces of construction equipment that will be used, and predictions of the noise levels at the closest noise-sensitive receptors. The Noise Control Plan prepared by the contractor will be approved by UPRR prior to construction. Measures to be included in the Noise Control Plan shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> <li>• Specific noise limits that shall not be exceeded will be identified. The recommended noise limits are given in Table 3.12.D. Also, the contractor shall be required to conduct noise monitoring to demonstrate compliance with contract noise limits.</li> <li>• Require the contractor to only use equipment that meets the noise limits in Table 3.12.D.</li> <li>• Where the construction cannot be performed in accordance with the requirements of the noise limits, the contractor shall be required to investigate alternative construction measures that would result in lower sound levels.</li> <li>• The contractor shall be required to use the following best management practices for noise abatement whenever practical: <ul style="list-style-type: none"> <li>▪ Utilize specialty equipment equipped with enclosed engines and/or high</li> </ul> </li> </ul> | <p>IS/MND, Section 3.XII</p> | <p>UPRR/Resident Engineer/Construction Contractor/SANBAG</p> | <p>During construction</p>                                | <p>UPRR</p>             |          |

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|---------------------|--|------------------------------|--|---|-------------------|----------|
|                     | <p>performance mufflers, as feasible.</p> <ul style="list-style-type: none"> <li>▪ Locate equipment and staging areas as far from noise-sensitive receptors as possible.</li> <li>▪ Limit unnecessary idling of equipment.</li> <li>▪ Install temporary noise barriers as needed where feasible.</li> <li>▪ Reroute construction-related truck traffic away from residential streets to the extent permitted by the relevant municipality.</li> <li>▪ Avoid impact pile driving where possible. Current construction plans do not include any impact pile driving.</li> </ul>  |                              |  |   |                   |          |
| <p><b>TRA-1</b></p> | <p>A Transportation Management Plan (TMP) will be prepared for the construction phases of the project. The objectives of a TMP are to maintain the safe movement of vehicles through the construction zone and to provide for the highest level of traffic circulation and access during the construction period. During construction, some traffic delays are anticipated. The TMP will include detailed information on measures taken for off-peak or nighttime work; flagging, lane, shoulder, street, ramp, or total facility closures; project phasing; temporary traffic screens; and details regarding the Construction Progress Schedule and delay penalties. The TMP will be prepared by the contractor prior to construction and will consist of but not be limited to the following elements to mitigate traffic inconvenience caused by construction activities:</p> <ul style="list-style-type: none"> <li>• Coordination and communication among all affected local agencies that provide services within the project study area, including but not limited to City of Colton Public Works Department, Colton Police Department, Colton Fire Department, Omnitrans, and utility providers.</li> <li>• Traffic Control: This project will require traffic control elements such as lane/shoulder closures and temporary signing/stripping on City streets.</li> <li>• Public Awareness Campaign (PAC): Although the majority of any major roadway closures will occur at night, vehicles traveling through the construction zone will likely experience longer than normal delays. To reduce these delays and confusion to the motoring public during construction activities, the City UPRR will implement a PAC. The purpose of the PAC is to keep the surrounding community abreast of the project's progress and construction activities that could affect travel plans. The use of brochures and mailers, hand-delivering notices to the vicinity, providing a telephone hotline, posting informational signs, local cable television and news advertising, media releases, opportunities to field questions on the project through internet and e-mail, notifications to targeted groups regarding revised transit schedules/maps, rideshare organizations, schools, and organizations representing people with disabilities, commercial traffic reporters/feeds, and public meetings, as appropriate, are effective tools for disseminating this information.</li> <li>• Signing: Information signing in the form of existing electronic message signs, changeable message signs, ground-mounted/fabric signs, and panel signs will be posted on Mount Vernon Avenue, La Cadena Drive, and Rancho Avenue and the local roadways south of and nearest to the railroad tracks prior to and during construction to inform motorists of delays, ramp closures, and alternate travel</li> </ul> | <p>IS/MND, Section 3.XVI</p> | <p>UPRR/Resident Engineer/Construction Contractor/SANBAG</p> | <p>During final design and construction</p> | <p>UPRR</p>       |          |

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|--------------|--|-----------------------|--|---------------------|-------------------|----------|
|              | routes.  |                       |  |                     |                   |          |
| <b>TRA-2</b> | During the PS&E phase, identify the temporary conversion of the 9th Street/I-10 Eastbound Ramps intersection from one-way stop control to all-way stop control within the project plans and specifications approved by UPRR. The contractor will complete the temporary conversion. At the conclusion of project construction, the City in consultation with Caltrans will determine whether or not the additional traffic controls should be removed or remain in place. If it is determined that the intersection shall be converted back to one-way stop control, the contractor shall complete the conversion. | IS/MND, Section 3.XVI | UPRR/Resident Engineer/Construction Contractor/Caltrans/SANBAG | During final design | UPRR              |          |

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## **Appendix C – Acronyms**

## LIST OF ACRONYMS AND ABBREVIATIONS

|          |   |
|----------|---|
| AB       | Assembly Bill   |
| ACHP     | Advisory Council on Historic Preservation                       |
| ACM      | Asbestos-Containing Material                                    |
| ADL      | Aerially Deposited Lead   |
| AMSL     | Above Mean Sea Level  |
| APE      | Area of Potential Effects                                       |
| AQMP     | Air Quality Management Plan                                     |
| ARA      | Aggregate Resource Area   |
| ARB      | (California) Air Resources Board                                |
| AREMA    | American Railway Engineering and Maintenance-of-Way Association |
| ASR      | Archaeological Survey Report                                    |
| AST      | aboveground storage tank  |
| BACM     | Best Available Control Measures                                 |
| bgs      | Below ground surface  |
| BMP      | Best Management Practices                                       |
| BNSF     | Burlington Northern Santa Fe                                    |
| BSA      | Biological Study Area   |
| Caltrans | California Department of Transportation                         |
| CDFG     | California Department of Fish & Game                            |
| CDMG     | California Division of Mines and Geology                        |
| CEQA     | California Environmental Quality Act                            |
| CFD      | Colton Fire Department  |
| cfs      | Cubic feet per second   |
| CGS      | California Geological Survey (formerly CDMG)                    |
| CHP      | California Highway Patrol                                       |
| CIA      | Community Impact Assessment                                     |
| CIDH     | cast-in-drilled-hole  |
| CO       | carbon monoxide   |
| CPD      | Colton Police Department  |
| CRA      | California Resources Agency                                     |
| CWA      | Clean Water Act   |
| dBA      | A-weighted Decibels   |

|            |  |
|------------|--|
| Department | California Department of Transportation    |
| DPM        | diesel particulate matter                  |
| DSF        | Delhi sands flower-loving fly              |
| DTSC       | Department of Toxic Substances Control     |
| FHWA       | Federal Highway Administration             |
| FMMP       | Farmland Mapping and Monitoring Program    |
| FRA        | Federal Rail Authority                     |
| ft         | foot/feet                                  |
| FTA        | Federal Transit Administration             |
| HCP        | Habitat Conservation Plan                  |
| HPSR       | Historic Property Survey Report            |
| HRER       | Historical Resources Evaluation Report     |
| I-10       | Interstate 10                              |
| IGR        | Intergovernmental Review                   |
| IS         | Initial Study                              |
| ISA        | Initial Site Assessment                    |
| LBP        | lead-based paint                           |
| $L_{dn}$   | day-night averaged noise level             |
| $L_{eq}$   | equivalent continuous sound level          |
| $L_{max}$  | maximum noise level                        |
| LOS        | Level of Service                           |
| LUST       | leaking underground storage tank           |
| MI         | Minimal Impact                             |
| MND        | Mitigated Negative Declaration             |
| mph        | Miles per hour                             |
| MRZ        | Mineral Resource Zone                      |
| MSAT       | Mobile Source Air Toxics                   |
| NAHC       | Native American Heritage Commission        |
| NCCP       | Natural Community Conservation Plan        |
| NES        | Natural Environment Study                  |
| NHPA       | National Historic Preservation Act of 1966 |
| $NO_2$     | nitrogen dioxide                           |
| NOA        | Naturally Occurring Asbestos               |

|                   |  |
|-------------------|--|
| NOI               | Notice of Intent   |
| NOT               | Notice of Termination                                    |
| NO <sub>x</sub>   | nitrogen oxide   |
| NPDES             | National Pollutant Discharge Elimination System          |
| NWP               | Nationwide Permit  |
| O <sub>3</sub>    | ozone  |
| OEHHA             | Office of Environmental Health Hazard Assessment         |
| PAC               | Public Awareness Campaign                                |
| Pb                | lead   |
| PCN               | Pre-Construction Notification                            |
| PM <sub>2.5</sub> | particulate matter less than 2.5 microns in diameter     |
| PM <sub>10</sub>  | particulate matter less than 10 microns in diameter      |
| PMP               | Paleontological Mitigation Plan                          |
| PPV               | Peak Particle Velocity                                   |
| PRSM              | Paleontological Resource Sensitivity Map                 |
| PS&E              | Plans, Specifications, and Estimates                     |
| PSI               | Preliminary Site Investigation                           |
| RCP               | reinforced concrete pipe                                 |
| REC               | Recognized Environmental Condition                       |
| ROG               | Reactive Organic Gas                                     |
| RTC               | Rail Traffic Controller                                  |
| RWQCB             | Regional Water Quality Control Board                     |
| SAN               | Streambed Alteration Notification                        |
| SANBAG            | San Bernardino Associated Governments                    |
| SBIA              | San Bernardino International Airport                     |
| SCAG              | Southern California Association of Governments           |
| SCAQMD            | South Coast Air Quality Management District              |
| SCE               | Southern California Edison                               |
| SHPO              | State Historic Preservation Officer                      |
| SMARTS            | Storm Water Multi-Application and Report Tracking System |
| SO <sub>2</sub>   | sulfur dioxide   |
| SWPPP             | Storm Water Pollution Prevention Plan                    |
| SWRCB             | State Water Resources Control Board                      |

|       |  |
|-------|--|
| TAC   | toxic air contaminant                                  |
| TCIF  | Trade Corridor Improvement Fund                        |
| TIGER | Transportation Investment Generating Economic Recovery |
| TMP   | Transportation Management Plan                         |
| UPRR  | Union Pacific Railroad                                 |
| USACE | United States Army Corps of Engineers                  |
| VCA   | Voluntary Cleanup Agreement                            |
| VdB   | Vibration decibels                                     |
| VIA   | Visual Impact Assessment                               |
| VOC   | Volatile Organic Compound                              |
| WDID  | Waste Discharger Identification                        |
| WQAR  | Water Quality Assessment Report                        |
| WQMP  | Water Quality Management Plan                          |
| XPI   | Extended Phase One Survey                              |